DOCUMENT RESUME

ED 127 485		CE 008 072

AUTHOR	Perkins, Lawrence K.
TITLE	The Evaluation of the Leon District Career Education Project, Grades K-14. Final Report. (June 1973 to July 1975).
INSTITUTION	University of West Florida, Pensacola.
SPONS AGENCY	Florida State Dept. of Education, Tallahassee. Div. of Vocational, Technical and Adult Education.
REPORT NO	VTAD-D-5-002
PUB DATE	[75]
NOTE	113p.
EDRS PRICE	MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS	*Career Education; Developmental Programs; Elementary Secondary Education; Federal Programs; *Pilot Projects; *Program Descriptions; *Program Evaluation; School Districts; State Programs
IDENTIFIERS	Florida

ABSTRACT

Both process and product objectives are focused on in this evaluation report. The design for the process element centered upon the eight major areas of developmental activities, or components, defined for preparing and implementing the career education program: (1) Elementary School Program, (2) Middle School Program, (3) Secondary/Post Secondary School Program, (4) Counseling and Guidance Services, (5) Career Information, Placement and Follow-Up Service, (6) In-Service Education Programs, (7) Community Involvement Programs, and (8) Materials Development and Dissemination Service. All available data sources are reviewed and analyzed in terms of the stated objectives for each of the eight components. The product evaluation involved a student testing program at all instructional levels using an experimental/control group. Test results are reported and the findings summarized. Based on conclusions regarding the achievement of process and product objectives, recommendations are presented for future implementation. Appended are a bibliography and list of data collection instruments used. (RG)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED127485

FINAL REPORT

Project No. VTAD-D[redacted]5-002

From June 1973 to July 1975

The Evaluation of the Leon District Career Education Project, Grades K-14

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

The University of West Florida
Pensacola, Florida

Lawrence H. Perkins

The project reported herein was conducted pursuant to a grant from the Division of Vocational, Technical, and Adult Education, Florida State Department of Education. Contractors undertaking such projects are encouraged to express freely their professional judgments in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent the official position or policy of the Florida Department of Education.

CE 008 072

CE 008 072

TABLE OF CONTENTS

INTRODUCTION.......... 1

Purpose of the Leon District Project.......... 1

Program Goals and Components of the Project.......... 1

Setting for the Leon District Project.......... 3

EVALUATION OF THE LEON DISTRICT PROJECT.......... 6

Program Objectives - Process.......... 6

Program Objectives - Product.......... 7

Purpose of the Evaluation.......... 11

Procedure for the Evaluation.......... 13

Limitations of the Study.......... 13

Definitions of Terms.......... 15

METHOD OF STUDY AND SOURCES OF DATA.......... 19

Process Evaluation.......... 19

Product Evaluation.......... 19

Hypotheses of the Evaluation.......... 21

Evaluation Sample.......... 23

Evaluation Design.......... 24

REVIEW OF RELATED RESEARCH.......... 27

ACHIEVEMENT OF THE PROCESS OBJECTIVES.......... 39

Project Staff Organizational Activities 39

Findings.......... 43

Component I - Elementary School Program (K-5).......... 43

Findings.......... 45

Component II - Middle School Program (6-8).......... 46

Findings.......... 47

TABLE OF CONTENTS (Continued)

Component III - Secondary and Post-Secondary School Program (9-14) 48

Findings 51

Component IV - Counseling and Guidance Services 51

Findings 52

Component V - Career Information, Placement and Follow-up 55

Findings 58

Component VI - In-Service Education Programs 58

Findings 63

Component VII - Community Development 63

Findings 65

Component VIII - Materials Development and Dissemination 65

Findings 69

Conclusions - Achievement of the Process Objectives 69

ACHIEVEMENT OF THE PRODUCT OBJECTIVES 71

Achievement in the Elementary Schools - Grades K-5 72

Findings 77

Achievement in the Middle Schools - Grades 6, 7 & 8 78

Findings 84

Achievement at the High School and Post High School Levels - Grades 9-14 86

Findings 101

Conclusions - Achievement of the Product Objectives 103

RECOMMENDATIONS 105

APPENDIX A - Bibliography of Related Research 107

APPENDIX B - Instruments Used to Collect Data for the Project 109

INTRODUCTION

Purpose of the Leon District Project

June 15, 1973, marked the beginning of the Leon District Career Education Project, a pilot effort in career education for the State of Florida. This pilot effort was conducted over a period of two years, and was concluded on June 30, 1975. The Leon District project was one of several federally funded programs in Florida designed to "lead the way" in implementing career education throughout the state. Recognizing the need for educational reform, the Leon District Board gave high priority to the implementation of needed changes so that Career Education might become a primary focus in grades K through 14 in all of its schools. Of prime concern to the Board was the disturbing fact that too many students were leaving school without adequate educational preparation, salable skills or meaningful career objectives.

The purpose of the Leon District project was specifically to reverse this trend, and to effect the needed changes by developing, implementing, evaluating and disseminating a comprehensive career education program. Such a program was designed to increase self awareness, develop favorable attitudes about the personal, social and economic significance of work, and to assist each student in developing and practicing appropriate career decision-making skills.

Program Goals and Components of the Project

The program goals, set forth for the Leon District project, were as follows:

1. Increased student self-awareness of personal abilities and skills in the perspective of work values and job options.

2. Career exposure, motivation and orientation and meaningful exploratory experiences to assist students in formulating realistic occupational goals and to enable them to better relate to the need and purpose of general/academic studies.
3. Job preparation and retraining in a wide variety of occupational areas geared to current and projected manpower needs and job performance requirements.
4. Student placement in either a job or an advanced level occupational training or baccalaureate program.

As a means of attaining these broad program goals, Ten Career Education Project Components were originally designed as the vehicles for direct implementation and as supporting elements in bringing career education to the Leon District Public Schools. These components, as originally indicated, were as follows:

1. Elementary School (Grades K-5)
2. Middle School (Grades 6-8)
3. Secondary and Post-Secondary School (Grades 9-14)
4. Guidance and Evaluation
5. Placement
6. In-Service Training
7. Community Involvement
8. Resources
9. Communications
10. Evaluation

Although modified somewhat as the program was developed, these components formed the essential elements of the District thrust in career education.

During the first year of the project (June, 1973 - September, 1974), the emphasis was on "process," namely, developing techniques and procedures for implementing the program, providing in-service education, preparing instructional materials and curricula, the designing of guidance, counselling and placement services and developing a program of school-community involvement. Continued emphasis on "process" was maintained during the implementation phase which began in the fall of 1974. The program was designed to increase self-awareness, to provide value clarification skills, and to develop career awareness at the elementary level. At the middle school level it was to further develop self-awareness and valuing skills, to provide opportunities for career orientation and exploration, and to develop educational and economic awareness and decision-making skills. At the high school and post high school level the program was to continue these elements and also to develop employability skills and some job preparation skills.

The Setting For The Leon County Project

Leon County, Florida is located at the easternmost section of the Florida panhandle. The only population area of major significance in the county is Tallahassee which is also the State Capital. Based on the 1970 census, the county population was 103,047 of which some 71,897 persons resided in and immediately around Tallahassee.

The county has a total labor force of over 43,000 persons, of which almost half are engaged in professional and clerical occupations. Approximately 48% of the working force is employed in state or county government and 4.7% is engaged in manufacturing. Approximately 22% of the labor force earns in excess of $15,000 per year. The median income is less than $9,000 per year.

Three state institutions of higher education, Florida State University, Florida Agricultural and Mechanical College and the Tallahassee Community College are located in Tallahassee. The Leon County School System consists of 19 elementary schools (Grades K-5), six middle schools (Grades 6-8), three comprehensive high schools (Grades 9-12), and the Lively Vocational-Technical School (Grades 10-14). The combined enrollment of all institutions in the county is in excess of 42,500 students. Approximately 20,000 are enrolled in the two universities, and some 600 at the community college. Elementary and middle schools enroll in excess of 15,300 students and the high schools more than 6,600 students.

As originally planned, the project was to be carried out over a period of 18 months, during which time ten schools were to be included in the pilot program. These ten schools were:

Elementary Schools: Concord, Ruediger, Sealey, Sullivan, Timberlane

Middle Schools: Cobb, Raa

Secondary Schools: Leon

Post Secondary Schools: Lively Area School
Tallahassee Community College

The elementary schools are feeder schools for the selected middle schools which, in turn, feed into the high school; from high school, the students may go to the universities, to the area vocational-technical school or to the community college.

Subsequently, for reasons stated elsewhere in this report, the project or experimental schools were reduced to nine. The following figures represent the approximate enrollments in the nine experimental schools during the 1974-1975 school year, the year of program implementation:

School	Grade	Enrollment
Concord	K-5	88
Ruediger	K-5	647
Sealey	K-5	760
Sullivan	K-5	597
Timberlane	K-5	776
Cobb	6-8	882
Raa	6-8	1,006
Leon	9-12	2,243
Lively	13-14	2,300

For purposes of observing a "control" element in the career education project, four "matching" non-project or control schools were selected for student participation in the testing program. Thus, students were selected from the following schools for the pre-tests in January, 1975, and for the post-tests in May, 1975:

School	Grade	Enrollment
Brevard	K-5	562
Astoria Park	K-5	730
Belle Vue	6-8	321
Godby	9-12	2,067

Implementation of career education in the several pilot schools emphasized areas of involvement provided for in the Leon District career education project. In the elementary schools the emphasis was placed on world of work orientation, personal values, self-awareness and occupational awareness; in the middle school the emphasis was placed on occupational exploration, self awareness and personal values; and in the high school and at the post high school level, the emphasis was on furthering self-awareness, and on the preparation for skill development and skill development itself.

EVALUATION OF THE LEON DISTRICT PROJECT

Program Objectives - Process

Eminating directly from the program goals, the broadly stated program (process) objectives which were formulated follow:

1. Developing an elementary program for grades K-5 to increase self-awareness and career awareness of students and to provide the skills necessary to relate self-concept to the broad range of options open to them in the world of work.

2. Developing programs for the middle school level, grades 6-8, to provide career orientation and meaningful exploratory experiences in the 15 occupational clusters as they relate to the students' expanding self-concept.

3. Developing programs for grade levels 9-14, that extend in-depth career exploration and job preparation experiences, including the utilization of work experience and cooperative education opportunities; the experiences would provide skills necessary for success in an occupation or subsequent educational program.

4. Continuing and expanding counseling and guidance services to students at all grade levels.

5. Articulating the functions of placement and follow-up.

6. Providing maximum career information for use of students through organized systems and media.

7. Planning and providing placement through coordinated efforts of the placement component personnel of the Career Education Center, counselors, occupational specialists, teachers and cooperating agencies.

8. Planning, providing and conducting follow-up studies and providing feedback of pertinent information to the school system for development of plans to meet present and future needs of students.

9. Providing in-service programs in the areas of orientation, planning and implementation of Career Education for teachers, administrators and supportive staff.

10. Developing a program of school-community involvement to provide continuing educational services to all people.

Subsequently, toward the end of the initial planning period, in May, 1974, program objectives 5, 6, 7 and 8 above, were assimilated into one major objective of two parts as objective 5:

a. Planning and providing career information and placement through coordinated efforts of the placement component of the Career Center counselors, occupational specialists, teachers and cooperating agencies.

b. Planning, providing and conducting follow-up studies and providing feedback of pertinent information to the school system for development of plans to meet present and future needs of students.

Thus, there were eight* major areas of developmental activities (components) defined for the "process" of preparing and implementing the program of career education. Briefly stated, these were:

1. Elementary School Program (K-5)
2. Middle School Program (6-8)
3. Secondary and Post Secondary School Program (9-14)
4. Counseling and guidance services
5. Career Information, Placement and Follow-up
6. In-Service Education Programs
7. Community Involvement
8. Materials Development & Dissemination

An analysis of the achievement of these developmental activities, or process objectives, appears in "Achievement of the Process Objectives."

Program Objectives - Product

The specific objectives for students at the various grade levels of career education implementation were derived from the major goals and program objectives indicated above and were stated in the following performance based terms:

---

* Although not expressly stated as an objective, the matter of materials development and dissemination was of significance and was thus added by the evaluators as the eighth component.

Grades K-5 - Elementary School

Career Education Elements	Student Objectives
	The student will:
SELF AWARENESS	1. --explore individual interest and abilities for personal development. 2. --develop positive attitude toward self and others.
VALUES CLARIFICATION	3. --develop capacity for participating in feelings or ideas of others and for respecting the worth of their feelings and ideas. 4. --identify what is important to self and others that motivates beliefs, choices and behavior.
DECISION MAKING	5. --develop ability to weigh alternatives, make realistic choices on basis of values and assume responsibility for decisions.
CAREER AWARENESS	6. --develop awareness of career development as a life-long process. 7. --explore interests that lead to leisure-time activities and future occupational goals.
EDUCATIONAL AWARENESS	8. --develop awareness that educational experiences are related to career development.
ECONOMIC AWARENESS	9. --develop awareness of the interdependence of work roles.

Grades 6-8 - Middle School

Career Education Elements	Student Objectives
	The student will:
SELF AWARENESS	1. --develop awareness of self in relation to occupations or potential careers.
VALUES CLARIFICATION	2. --develop attitudes of respect and appreciation toward workers in all fields. 3. --develop wholesome attitudes toward work and society. 4. --develop awareness of individual values and their effect on career choice.

Grades 6-8 - Middle School (Continued)

Career Education Elements	Student Objectives
	The student will:
CAREER DECISION MAKING	5. --gain experience in decision making. 6. --develop awareness of relevant factors to be considered in decision making. 7. --refine and strengthen decision making skills.
CAREER AWARENESS/ ORIENTATION	8. --develop awareness of the many occupations/ careers available. 9. --become familiar with occupational classifications and clusters.
EDUCATIONAL AWARENESS	10. --develop awareness of the educational preparation required for and related to various careers.
ECONOMIC AWARENESS	11. --develop awareness of the relationship between the economic system, job opportunity, life style and career choice.
CAREER ORIENTATION/ EXPLORATION (EDUCATIONAL AND ECONOMIC AWARENESS)	12. --continue exploring occupations as they relate to individual abilities, values, interests and achievements, and begin to identify tentative career choices to be investigated in high school.

Grades 9-12 - High School

Career Education Elements	Student Objectives
	The student will:
SELF AWARENESS, VALUES CLARIFICATION	1. --demonstrate self-awareness by identifying his major abilities, interests, values and achievements.
CAREER DECISION MAKING	2. --relate abilities, interests, achievements, personal values and influence of others' values to occupational areas.
CAREER DECISION MAKING	3. --identify and utilize sources of individual career counseling to make a tentative commitment to a career direction and register in appropriate courses. 4. --identify his choice of placement--higher education, vocational/technical education or employment--following graduation.

Grades 9-12 - High School (Continued)

Career Education Elements	Student Objectives
	The student will:
EDUCATIONAL AWARENESS ECONOMIC AWARENESS CAREER EXPLORATION	5. --explore occupational cluster areas, noting key occupations and the educational requirements, economic implications, required skills and job opportunities related to occupations.
EDUCATIONAL AWARENESS	6. --identify the relationship between academic training (general background and basic skills courses) and career opportunities/ preparation.
EMPLOYABILITY SKILLS AND JOB PREPARATION	7. --demonstrate beginning competencies needed to obtain and maintain employment and to progress in the world of work. 8. --develop specific employability skills needed to obtain and maintain employment. 9. --develop occupational/academic skills needed for entry level employment, advanced occupational training or higher educational training relative to career choice.

Grades 13-14 - Vocational-Technical School

Career Education Elements	Student Objectives
	The student will:
SELF AWARENESS	1. --demonstrate self-awareness by identifying his major abilities, interests, values and achievements.
CAREER DECISION MAKING	2. --relate his abilities interests, achievements, personal values and influence of others' values to occupational areas. 3. --identify and utilize sources of individual career counseling to make a tentative commitment to a career direction and to register in appropriate courses. 4. --identify his choice of placement--higher education, vocational/technical education or employment--following graduation.
CAREER EXPLORATION EDUCATIONAL AWARENESS, ECONOMIC AWARENESS	5. --explore occupational cluster areas, noting key occupations and the educational requirements, economic implication, required skills and job opportunities related to occupations. 6. --explore and select fields of interest and develop skills necessary for enjoyment of leisure interests.

Grades 13-14 - Vocational-Technical School (Continued)

Career Education Elements	Student Objectives
	The student will:
EDUCATIONAL AWARENESS	7. --identify the relationship between academic training (general background and basic skills courses) and career opportunities/preparation.
EMPLOYABILITY SKILLS AND JOB PREPARATION	8. --demonstrate beginning competencies needed to obtain and maintain employment and to progress in the world of work. 9. --develop specific employability skills needed, to obtain and maintain employment. 10. --develop occupation/academic skills needed for entry level employment, advanced occupational training or higher educational training relative to his career choice.

Purpose of the Evaluation

The Leon District Career Education Project was developed and implemented as an integral part of the total Florida effort in the diffusion of career education. The project was funded for a period of 18 months* under a Federal grant with Vocational Education Funds and state funds. As such, the project was also an integral part of the State's vocational-technical effort.

In order to justify the expenditure of human and material resources, it was felt that the effectiveness of the Leon District Career Education Project should be carefully and objectively determined. In an effort to ascertain the nature and degree of program achievement, an analysis and evaluation of both process and product objectives are necessary. From evaluation findings it may then be determined which elements of the process and/or product development and implementation have been effective and have merit, or which elements are not worthy of further consideration. Such information, used effectively, disseminated and diffused into other districts, will be of value and, at the same time, fulfills the basic intent and purpose of the pilot effort.

* At the end of the 18 month period, the expiration date was extended for 6 months, but without additional funds.

The purpose of this evaluation is, then, to analyze and assess "process" development and implementation of the eight major areas of developmental activities. In this process, staff, teachers and administrators plan, design and develop the techniques, procedures, materials, curricula and services for the program. The purpose, further, is to evaluate "product" through the measurement of student achievement of the career objectives developed in the process phase. More specifically, it is intended to determine whether or not students in the career education program, as compared to students in the traditional education program, gained a higher level of proficiency in, or made greater gains toward acquiring the competencies identified in the career education elements. These elements, as identified in the project, are:

Self Awareness
Values Clarification
Decision Making/Career Decision Making
Career Awareness/Orientation
Educational Awareness
Economic Awareness
Employability Skills
Job Preparation

Thus, an effort was made to ascertain answers to the following questions: Did students in the career education programs (experimental group) as compared to students enrolled in traditional education programs (control group):

1. develop a greater capacity for self-awareness?
2. develop a greater ability in clarifying personal values?
3. demonstrate greater facility at decision making, or at career decision making?
4. acquire more knowledge about careers?
5. develop a greater awareness of the relationships between academics and career development?
6. develop a greater awareness of the economic aspects of careers?
7. learn more about different jobs and job clusters?

8. learn more about skills needed to get and hold a job?
9. develop more occupational skills?

Procedure for the Evaluation

The Department of Technical-Vocational Studies, University of West Florida, had the responsibility for the design of the evaluation model, processing the data and preparing the final report, on both aspects of the evaluation, namely, "process" and "product." Measurement instruments were selected and/or developed by the staff of the Leon District project together with evaluation consultants from Florida State University.

The selection of students for the pre and post-test evaluations in the high schools was conducted by the counselors in the project schools from departments where the career education program was being implemented and from "matching" departments or classes in non-project schools. In the elementary schools, the curriculum coordinator worked with teachers on each grade level to determine the class to be tested. However, in reality, classes to be tested were not randomly drawn and student samples within groups were not randomly selected. Tests were not uniformly administered insofar as administering personnel and facilities were concerned. The pretest was administered in January, 1975, and the post test was administered in May, 1975.

All data from the product evaluation as well as the process evaluation were submitted by the project staff to The University of West Florida. Data from the process activities were studied and analyzed by the university staff and summarized as shown in this report. Data from the test-re-test product evaluation were processed, analyzed by computer and summarized as presented herein.

Limitations of the Study

The study was limited to the degree that the reported data, records and other information, collected and developed by the project staff, were accurate and complete. It was further limited to the extent that the testing instruments were valid, that the professional integrity of the teachers, counselors, administrators, and the evaluation coordinator was upheld and that the students performed at their best on the written tests or inventories. The study was further limited to the extent that students selected for the control group met the same criteria as students in the experimental (career) group.

An examination of the data indicates further limitations which may have affected the career education delivery system as well as the evaluation efforts of the project. These are as follows:

1. The delayed beginning of the project, from January 15 to June 15, 1973, created scheduling conflicts and left insufficient time for staff project organization and the planning of summer workshops.

2. The timing of the project originally scheduled the project to expire at the end of December, 1974, which ultimately was at mid-point of the implementation phase. This fact,and the uncertainty of an extension of time, made planning for implementation, monitoring and evaluation strategies difficult. This was especially critical in requesting administrators and faculties in project schools to make commitments which might not be required if the project were not to be extended.

3. During the planning phase, as well as during the implementation phase, the heavy workload and limited planning time of most school personnel made it difficult for the project staff to communicate with them regularly or for extended periods of time.

4. During the implementation phase of the program, progress was slow and fragmented. Repeated efforts were made to facilitate the implementation and to enlist total participation. Some causes for this problem were:

    a. Shortened school day.
    b. Heavy demands on teacher time.
    c. Multiple, uncoordinated investigative or experimental projects in the same schools.
    d. Lack of total faculty participation in the in-service programs.
    e. Dissemination of information problems.

5. Insufficient time was afforded the guidance coordinator to work with faculties and counselors in elementary schools to develop understanding of guidance functions and activities.

6. Pre-tests were not administered at the beginning of the 1974 school year but, rather, were delayed until January, 1975. Post-tests were administered in May, 1975.

7. Samples of students involved for testing purposes were not randomly selected.

8. Administering the "Worker Information Scale (Modified)," in the non-project elementary schools, would appear to have served as a stimulas/motivational factor to cause teachers to include career education concepts in their teaching. The data indicate that statements of teachers confirmed this.

9. Conflicting activities in the middle and high schools appreciably reduced the number of students who were available for the post-test in May, 1975.

10. There was little if any consistency in administering the tests from one school to another as concerns the administrators of the tests and the facilities and conditions in and under which the tests were administered.

11. An examination of the tests and/or instruments used in the program indicates that they are not all necessarily suited to evaluate progress in terms of the student objectives stated.

12. Data gathered from students, principally through tests and/or instruments, is limited and insufficiently conclusive.

13. A limited staff, coupled with the magnitude of the project, precluded adequate monitoring and periodic evaluation of the program, designed to reach all students, at all areas, K-14, in nine pilot schools.

14. Program monitoring was hampered because requested reports from teachers were not submitted on a regular basis. This caused considerable delay in program revision.

Definitions of Terms

For the purpose of evaluating the career education program, the following terms are defined:

achievement -- student progress toward the over-all goals of an educational program.

affective education -- emotional, attitudinal and valuing behaviors of learners reflected by interests, appreciations, etc.

academic education -- structured formal courses concerned with intellectual processes.

attitudes -- individual reactions to the experiences of a person's world, expressed as for, against, or indifferent to concepts included in a measuring instrument for this project.

career education -- K-14 program related to the 8 elements, namely self awareness, educational awareness, career awareness, values clarification, economic awareness, decision making, employability skills, and job preparation, which have been fused into the existing curriculum through classroom and guidance activities.

career education students -- any student from a school which participated in the career education project.

career awareness -- comprehending the broad range of careers that are available and what is involved in the development, growth, behavior, training and rewards of the individuals affiliated with specific occupations.

career exploration -- instruction with more intensive experiences to enable students to explore clusters as well as specific occupations which people presently pursue as careers.

career orientation -- instruction with specific written objectives to orient students to one or more different occupations which people presently pursue as careers.

career related curriculum -- instruction with written objectives to provide students career awareness, career orientation and exploration, occupational awareness, occupational orientation and exploration and entry level job skills.

decision-making skills -- the aptitudes of problem-solving thinking processes necessary to understand and participate in the social, economic, and political institutions of society.

economic awareness -- a knowledge of the production, distribution, and consumption of consumer goods and their implications for career education.

educational awareness -- an awareness of the relationships between education and the world of work and the effect this relationship may have on the student's life role and that of others.

employability skills -- skills which are related to the searching for, locating and securing occupational placement.

entry level job skills -- knowledge, skills and attitudes effective enough to gain employment and begin a career in an occupational area.

follow-up studies -- a systematic examination of the performance of former students in relation to goals and objectives of the educational program through which the students are prepared.

group guidance activity -- an interactive session involving a qualified counselor or occupational specialist and several students with provisions for students to engage in the problem solving/decision making process regarding the identification and selection of an occupational or educational goal. Peer relationships and association are a part of the process.

individual career counseling -- a one student-one counselor session involving a qualified counselor and a student, with provisions to enable a student to engage in the problem solving/decision making process regarding the identification and selection of an occupational or educational goal.

interest in an occupation -- a student's expressed preference for an occupational field as expressed through the evaluation instruments.

job preparation skills -- this involves the development of job skills, technical knowledge, and work habits and attitudes, which will prepare the student for employment. This element also provides the student with the knowledge and foundations in preparation for professional education beyond high school.

matching schools -- student groups selected, for evaluation purposes, from schools which did not participate in the career education project, but were comparable to schools in the project. They were selected on the basis of socioeconomic levels, racial balance, general ability and achievement.

occupation -- a work activity that serves as one's source of livelihood.

placement services -- assistance to school graduates or leavers, depending upon the desires of the individual to obtain gainful employment, to continue education, or to engage in a combination of employment and further education.

salable skills -- physical and mental skills which are required of an individual to perform in a job for which he receives pay.

school drop-out -- a student who leaves school before completing the program.

self-awareness -- the perceptions which one holds regarding "the kind of person he is" and "the kind of person he would like to be."

student performance objectives (measurable) -- a description of the kind of performance that will be expected at the end of the instructional unit and at the end of the course, the teaching vehicle used as criteria for success.

traditional programs -- an educational program which has been followed continuously and has generated time honored educational practices or curriculum.

values clarification -- the development of an individual's personal value system.

vocational courses -- systematically structured blocks of instruction to teach knowledge, skills, and attitudes necessary for entry level employment.

METHOD OF STUDY AND SOURCES OF DATA

Process Evaluation

The evaluation design for the process element of the Leon District Career Education Project centered upon the eight major areas of developmental activities, or components, defined for the process of preparing and implementing the program of career education. These components were:

1. Elementary School Program
2. Middle School Program
3. Secondary/Post Secondary School Program
4. Counseling and Guidance Services
5. Career Information, Placement and Follow-Up Service
6. In-Service Education Programs
7. Community Involvement Program
8. Materials Development and Dissemination Service

The design included a review and audit of all available, related data, and information pertinent to the process of developing the means and mechanics for implementing the career education program. In this procedure, data were collected, carefully studied and analyzed, and citations made of reported facts and activities and compared with the stated objectives relating to the several components. This report is then, in part, a review and audit of the project reports, appendices, records and other data documenting or supporting the quantitative accomplishment of the project in the development and implementation of its process objectives.

The sources of data for the review and audit included documentation of pertinent data, activities of staff, teachers, administrators and the public, records and reports of meetings, reactions and comments of teachers and staff personnel and other written materials.

Product Evaluation

In the past several years, an increasing number of studies have been conducted which were designed to measure the achievement of program process objectives and student product objectives in career education. Similarly, although not yet adequately and definitively refined, a larger number of instruments designed to measure achievements in career education have become available. Three instruments available from commercial vendors were used and five instruments or inventories were developed or adopted by the project staff to collect data for the evaluation. The design provided for pre and post-testing. Data for the study of the product were collected primarily from students. Data were also collected from teachers with observation inventories and teacher checklists. The following instruments were used at the indicated grade levels*:

Grade Level	Instrument
1. 1 and 2	Worker Information Scale (Modified) Level I
2. 3, 4 and 5	Worker Information Scale (Modified) Level II
3. K-5	Teacher's Observation Scale of Student Behaviors
4. 6	Career Awareness Inventory
5. 7 and 8	A Measure of Career Information - Attitudes and Concepts
6. 9 and 11 13 and 14**	Assessment of Career Development
7. 10 and 12	Career Maturity Inventory
8. K-12	Teacher Career Education Activities Checklist

---

* See Appendix B for more complete details on instruments.

** Data for grades 13 and 14 were collected only for a pre-test on two small groups at Lively School (no data from the junior college). Consequently, these data were not treated for analysis or discussion in this report.

Hypotheses of the Evaluation

The following hypotheses served as guides for the evaluation:

A. Elementary School Level, Grade K-5

1. Students in the experimental (project) group, as compared to students in the control (non-project) group, will:
    - a. develop a greater capacity for self-awareness
    - b. develop a greater ability in clarifying personal values
    - c. demonstrate greater facility at decision-making
    - d. acquire more knowledge about careers
    - e. develop a greater awareness of the relationships between academics and career development
    - f. develop a greater awareness of the economic aspects of careers

B. Middle School Level, Grades 6, 7 and 8

1. Students in the experimental (project) group, as compared to students in the control (non-project) groups, will:
    - a. develop a greater capacity for self-awareness
    - b. develop a greater ability in clarifying personal values
    - c. demonstrate greater facility at decision making and at career decision making
    - d. acquire more knowledge about careers, jobs and job clusters
    - e. develop a greater awareness of the relationships between academics and career development
    - f. develop a greater awareness of the economic aspects of careers
    - g. learn more about skills needed to get and hold a job

C. High School Level, Grades 9-12

1. Students in the experimental (project) group, as compared to students in the control (non-project) group will:
    - a. develop a greater capacity for self-awareness and values clarification
    - b. demonstrate greater facility at decision making and at career decision making
    - c. develop a greater awareness of the relationships between academics and career development
    - d. develop a greater awareness of the economic aspects of careers
    - e. learn more about different jobs and job clusters

f. learn more about skills needed to get and hold a job
g. develop more occupational skills

The research hypotheses were tested by accepting or rejecting the following null hypotheses:

$H_0 1$: There is no significant difference between the experimental (project) group and the control (non-project) group in elementary grades, K-5, relative to:

1. capacity for self-awareness
2. ability in clarifying personal values
3. facility for decision making
4. achievement of knowledge about careers
5. development of awareness of academic-career relationships
6. development of awareness of economic aspects of careers

$H_0 2$: There is no significant difference between the experimental (project) group and the control (non-project) group in the middle grades, 6-8, relative to:

1. capacity for self-awareness
2. ability in clarifying personal values
3. demonstrating greater facility at decision-making, or career decision-making
4. achievement of knowledge about careers, jobs and job clusters
5. development of awareness of academic-career relationships
6. development of awareness of economic aspects of careers
7. learning more about skills needed to get and hold a job

$H_0 3$: There is no significant difference between the experimental (project) group and the control (non-project) group in high school grades 9-12, relative to:

1. capacity for self-awareness or values clarification
2. demonstrate greater facility at decision-making, or career decision-making
3. development of awareness of academic-career relationships
4. development of awareness of economic aspects of careers
5. achievement of knowledge about jobs and job clusters
6. learning more about skills needed to get and hold a job
7. developing more occupational skills

Student Sample Used In Testing

For reasons apparently beyond the control of project staff, a random selection of schools, classrooms and students for purpose of pre and post-testing was not possible. Consequently, a "Sample Model" normally designed for a pre-post testing situation could not be employed. However, in order to reflect the population tested at all levels in both experimental and control groups, pre and post, the following table is included:

NUMBER OF STUDENTS TESTED*

		Experimental		Control	
Grade		Pre-Test	Post-Test	Pre-Test	Post-Test
1		49	54	50	54
2		53	52	46	53
3		57	60	52	50
4		58	56	52	52
5		56	57	53	53
	Total Elementary	273	279	253	262
6		53	54	64	57
7		42	42	44	44
8		38	38	44	44
	Total Middle	133	134	152	145
9		57	45	46	43
10		53	38	61	40
11		53	35	42	33
12		53	26	51	21
	Total High School	216	144	200	137

* Does not include grade K-5 students in the Teacher Observation Scale of Student Behaviors. See page 75.

EVALUATION DESIGN FOR A
COMPREHENSIVE VOCATIONAL EDUCATION PROGRAM FOR CAREER DEVELOPMENT IN LEON COUNTY, FLORIDA
1974-1975 SCHOOL YEAR

HYPOTHESES	SYMBOLIC STATEMENT	Instrument		STATISTICAL TREATMENT
		Title	Completed By	
HYPOTHESES FOR PRODUCT OBJECTIVES				
A. Elementary School Level (Grades K-5)				
1. Students in the experimental group as compared to students in the control group will:				
a. develop a greater capacity for self-awareness	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Teacher Observation Scale	Teacher	Chi Square
b. develop a greater ability in clarifying personal values	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Teacher Observation Scale	Teacher	Chi Square
c. demonstrate greater facility at decision-making	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Teacher Observation Scale	Teacher	Chi Square
d. acquire more knowledge about careers	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Teacher Observation Scale Worker Information Scale	Teacher Student	Chi Square Analysis of Variance
e. develop a greater awareness of the relationships between academics and career development	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Worker Information Scale	Student	Analysis of Variance
f. develop a greater awareness of the economic aspects of careers	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	None		

EVALUATION DESIGN FOR A
COMPREHENSIVE VOCATIONAL EDUCATION PROGRAM FOR CAREER DEVELOPMENT IN LEON COUNTY, FLORIDA
1974-1975 SCHOOL YEAR

HYPOTHESES	SYMBOLIC STATEMENT	Instrument		STATISTICAL TREATMENT
		Title	Completed By	
HYPOTHESES FOR PRODUCT OBJECTIVES				
B. Middle School Level (Grades 6-8)				
1. Students in the experimental group as compared to students in the control group will:				
a. develop a greater capacity for self-awareness	H_1: $E(\text{Gain})-C(\text{Gain})>0$ H_0: $E(\text{Gain})-C(\text{Gain})\leq 0$	None		
b. develop a greater ability in clarifying personal values	H_1: $E(\text{Gain})-C(\text{Gain})>0$ H_0: $E(\text{Gain})-C(\text{Gain})\leq 0$	A Measure of Career Information (Grades 7 and 8)	Students	Analysis of Co-Variance
c. demonstrate greater facility at decision making and at career decision making	H_1: $E(\text{Gain})-C(\text{Gain})>0$ H_0: $E(\text{Gain})-C(\text{Gain})\leq 0$	None		
d. acquire more knowledge about careers, jobs and job clusters	H_1: $E(\text{Gain})-C(\text{Gain})>0$ H_0: $E(\text{Gain})-C(\text{Gain})\leq 0$	Career Awareness Inventory (Grade 6)	Students	Analysis of Variance
		A Measure of Career Information (Grades 7 and 8)	Students	Analysis of Co-Varianc
e. develop a greater awareness of the relationship between academics and career development	H_1: $E(\text{Gain})-C(\text{Gain})>0$ H_0: $E(\text{Gain})-C(\text{Gain})\leq 0$	Career Awareness Inventory (Grade 6)	Students	Analysis of Variance
		A Measure of Career Information (Grades 7&8)	Students	Analysis of Co-Variance
f. develop a greater awareness of the economic aspects of careers	H_1: $E(\text{Gain})-C(\text{Gain})>0$ H_0: $E(\text{Gain})-C(\text{Gain})\leq 0$	Career Awareness Inventory (Grade 6)	Students	Analysis of Variance
g. learn more about skills needed to get and hold a job	H_1: $E(\text{Gain})-C(\text{Gain})>0$ H_0: $E(\text{Gain})-C(\text{Gain})\leq 0$	None		

EVALUATION DESIGN FOR A
COMPREHENSIVE VOCATIONAL EDUCATION PROGRAM FOR CAREER DEVELOPMENT IN LEON COUNTY, FLORIDA
1974-1975 SCHOOL YEAR

HYPOTHESES	SYMBOLIC STATEMENT	Instrument		STATISTICAL TREATMENT
		Title	Completed By	
HYPOTHESES FOR PRODUCT OBJECTIVES				
C. High School Level (Grades 9-12)				
1. Students in the experimental group as compared to students in the control group will:				
a. develop a greater capacity for self awareness and values clarification	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Assessment of Career Development (Grades 9 and 11)	Students	t Test
		Career Maturity Inventory (Grades 10 and 12)	Students	t Test
b. demonstrate greater facility at decision making and at career decision making	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Same as a. above	Students	t Test
		Same as a. above	Students	t Test
c. develop a greater awareness of the relationship between academics and career development	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Same as a. above	Students	t Test
		Same as a. above	Students	t Test
d. develop a greater awareness of the economic aspects of careers	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Same as a. above	Students	t Test
		Same as a. above	Students	t Test
e. learn more about different jobs and job clusters	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Same as a. above	Students	t Test
		Same as a. above	Students	t Test
f. learn more about skills needed to get and hold a job	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	Assessment of Career Development (Grades 9 and 11)	Students	t Test
g. develop more occupational skills	H_1: E(Gain)-C(Gain)>0 H_0: E(Gain)-C(Gain)≤0	None		

REVIEW OF RELATED RESEARCH

A comprehensive search of the literature conducted with the assistance of the Florida Educational Resources Information Center, reveals an extensive wealth of information and pertinent data in hundreds of related career education program evaluations. During the past year most states have concluded their three-year pilot programs in career education and consequently, a large number of reports are available from across the nation. Reported here are reviews of selected research efforts which were most closely related to the Leon District Career Education project. Some of these studies are similar in the design and procedure of this evaluation; others are reported in order to establish some procedural validity of this evaluation.

Wasden evaluated an exemplary program in Utah in which the purposes were to provide youth, in small rural high schools, skills to enter industrial occupations or preparation to continue education in post high school institutions. Industrial and agricultural mechanic educators combined efforts to reach the objectives. Additional purposes of the project were to: (a) provide leadership for local school administrators, (b) establish pilot programs, (c) provide a special teacher education program, and (d) help local school boards establish exemplary programs. Cooperation was received from teachers, industrial personnel, and parents. The evaluation consisted of (a) experimental and control groups, (b) pre and post-tests, and (c) subjective observations by parents, school principals, and superintendents.(1)

In a study to test the validity of programmed instruction against conventional techniques of teaching high school youth bookkeeping, Gibbs and others utilized the pre and post test design to measure the achievement of the experimental and control groups. Four classes of students were subjects of the evaluation with two classes randomly designated as experimental group which received the programmed instruction technique. The remaining two classes were designated as the control group which received conventional teaching techniques to achieve the same objectives. Statistical treatment to analyze the data consisted of the mean, standard deviation, and the t test. (2)

Delon (3) conducted an evaluation of computer assisted instruction in first grade math for economically and educationally disadvantaged McComb, Mississippi youth. Purposes of the investigation were to ascertain answers to the following questions: (a) What effects, if any, did the treatment have on achievement in mathematics and reading? (b) What effects, if any, did the treatment have on measured intelligence? (c) If the treatment produced significantly greater results than regular instruction, were the treatment differences maintained through the following year? The design included (a) students randomly assigned to experimental and comparison groups in the project school, (b) comparison groups in a control school separate from the project school, (c) pre and post tests, and (d) a follow-up study of youth in the experimental group one year after they participated in the project. Standardized tests used to gather the data were the California Achievement Test, the Wechsler Intelligence Scale for Children, and the Otis-Lennon. The analysis of variance and t test techniques were utilized for data analysis.

A research design which included hypotheses testing and post test data was used to evaluate Florida's Vocational Exemplary Programs in 1970-71 (4). Data were collected from students, teachers, counselors, and administrators in exemplary and comparison schools in Dade, Duval, Escambia, and Hillsborough Counties relative to the student achievement in (1) manipulative-type salable job skills, (2) basic education skills, (3) attitudes, personal traits and work habits, and (4) school attendance and drop-out rate. Data were also collected relative to: (1) the student's expressed interest in an occupational choice, (2) the number of confrontations with law enforcement agencies by students in exemplary programs, (3) student enrollment in vocational related courses, (4) the amount of vocational and related instruction offered, (5) the amount of individual and group counseling received, and (6) instructional techniques utilized by teachers. The mean score, t test, Chi Square, and Mann-Whitney U statistical techniques were used to analyze the data. Three instruments were purchased from commercial publishers and five instruments were constructed to gather the data.

A comprehensive program of vocational education in a rural, economically depressed area is reported by Holstein. (5) Specific features include the introduction of: (1) career awareness in grades 1-6, (2) career orientation activities in grades 7-8, (3) career exploration in grades 9-12, (4) intensified occupational guidance, counseling, and job placement activities, and (5) intensified skill development for students terminating their formal education. Project evaluation indicated that some teachers were having problems correlating existing disciplines with occupational study. This led to the recommendation that teachers use career education materials to supplement existing texts. Assessment of the model was through structured interviews, instruments yielding quantitative and qualitative measures of cognitive and affective characteristics and instruments yielding comparative profiles.

An exemplary program in occupational education in rural and urban Kansas school settings was evaluated by Kansas State University staff. The project was established in three locations: a small rural school district, a medium-sized suburban school district, and a large urban school district.

Each setting demonstrates occupational awareness and orientation activities; cooperative education opportunities; intensive counseling and placement services. Quantitative, qualitative and product evaluations, as well as staff perceptions of the programs, were conducted. Kansas State University, through contractual agreement with the State Board of Education, performed such functions as in-service teacher training, teacher workshops, curriculum development and evaluation services. (6)

In the Knoxville, Tennessee Contemporary Curriculum for Career Development, career education is being infused in grades K-12 with one hundred percent student participation in grades K-8 and fifty-two percent participation in grades 9-12. Exploratory experiences, orientation programs, and skill training are provided along with a work-study program. Supportive services available to all students include guidance counseling, placement, follow-up and career orientation programs. Evaluation of the career education program will consider three major groups: students, teachers, and parents. Students will be measured for knowledge of occupations, change in interests, self-image, acceptance of responsibility, getting along with people, and development of work values. Teachers will be measured for knowledge of occupations, attitude and morale. Parents will be tested for attitudes, interests and participation. Student enrollment in vocational education will also be evaluated. (7)

Conducted in Mississippi, a federally funded 13-month inservice teacher training project began with a 3-day staff training workshop, which served to orient a superintendent, local project coordinator, and guidance counselor from each of four schools to the career education concept. Each of the four project schools then held a local inservice training workshop, involving 339 teachers and/or administrators. An inservice training handbook was developed, containing a rationale for career education, concepts, objectives, and suggested activities. Leaders from business and industry gave speeches on career education in the community, and teachers met by grade level and subject matter area to discuss the implementation of career education concepts. Problem areas in program development were identified by means of a teacher questionnaire, and resource lists were provided for teachers. A final workshop was held to evaluate progress, discuss implementation problems, and plan future activities. Continuation of inservice training in career education is recommended, since the workshop objectives were successfully achieved. (8)

The guidelines for developing a model for an integrated comprehensive career education program in North Carolina at the elementary and secondary levels include a mission statement, a career education rationale, a wide range of educational objectives, and key considerations for statewide implementation of the career education concept. An advisory committee of leaders from business and industry, the professions, parents, and teachers will provide feedback from the home and community and will help coordinate community resource persons and activities. A multimedia approach will involve students in "real-life" activities that focus on self-understanding, career awareness, and the development of positive attitudes. Special programs for the disadvantaged, cooperative programs, and evening high school pilot programs for students with special needs will be provided at the secondary level. A curriculum planning program, articulation planning, and a career choice guidance program will provide information for target school personnel. Long-range diffusion activities will be carried out by city and county administrative and supervisory personnel. Included in the guide are suggested exploratory learning activities, teaching procedures, and resource lists. (9)

Jorgenson (10) assesses the effectiveness of the second year of the exemplary comprehensive occupational orientation and vocational program in the Tulsa, Oklahoma public schools. Data were obtained through a variety of student tests, teacher quarterly reports, interviews with administrators, and questionnaire responses. Findings obtained were: (1) at the elementary level, the special interest clubs program appears to have been successful, (2) significant gains were made from pre to post-test in regard to occupational awareness, (3) the hands-on experience program in the junior high curriculum proved to be effective, (4) students enrolled in cluster courses at the tenth grade level progressed significantly, (5) the addition of counselors and a coordinator at each level seemed to have strengthened the operation of the program, and (6) indications are that the program has prompted teachers to become more innovative in program planning and implementation strategies. Recommendations are included.

Deay (11) prepared a publication designed to aid elementary teachers in defining and illustrating career education concepts within the framework of the science and social studies curriculums they are teaching. Behavioral objectives were written to connect the subject areas with career education themes. The center for vocational and technical education at the Ohio State University developed 8 career education elements, composed of 32 themes, which were used to write the six science and six social studies units presented in this document. The career elements are related (in a 3-column format of themes, objectives, and unit content) to the subject content responsibilities of elementary teachers as outlined by the New York State Education Department syllabuses for social studies and science. The models are tentative and are not intended as teaching units but rather to assist in providing direction to teacher task forces in curcirculum development.

A three-year project in the Watertown (S.D.) Public Schools was designed to produce greater integration of career education into the existing curriculum of all grades. Individual development was emphasized in the elementary and junior high programs, with more emphasis placed on specific decision-making situations during the final years of high school. The first phase included in-depth planning; the second oriented the staff to the project; the third phase integrated occupational information, exploration, and career education concepts into the curriculum and involved intensive occupational counseling for junior and senior high students. The final phase included data collection and dissemination of project materials and information. Seven major goals and strategies used in their attainment are outlined. Results and accomplishments are described. A final evaluation of the project includes participant and outside observations, most of which point to an exceptionally successful program. (12)

Bonitatebus (13) reports on the Bridgeport, CT career education program which has three basic functions: (1) preparation for career choice through the study of self-appraisal or self-realization and occupational information, (2) career preparation through basic education skills, employability skills, actual skill attainment and related skills, and (3) placement and follow-up. Self-worth and high self-concepts are developed in the elementary grades, orientation and exploration being emphasized in the middle school, with more emphasis placed on decision-making situations during the high school years and future plans and/or training for post-high school years. A description of the elementary curriculum is given and the secondary curriculum is discussed, including brief descriptions of thirteen vocational training programs. Guidance involvement is reflected in all levels K-14; a materials center provides supportive materials for teachers. A work experience program is designed at the high school level for potential dropouts. Conclusions, implications and recommendations are formulated.

The Maryland Career Development Project, reported by Carey (14), is a three-year model implemented in Baltimore City with information dissemination and provision of services to the entire state. It presents in its final report descriptions of the project's seven components and the major results or accomplishments of the project, supported where possible by evaluative data collected during the first two years. The project's components were: an elementary career development resource component, a junior high work-oriented component, an information and placement system, career exploration workshops, a television series, a career development resource notebook, and the Maryland Career Development Conference.

A third party evaluation of four selected career education projects in Pennsylvania is reported by Ciavarella (15). This integrated report allows the coordinator to document in one place not only the individual programs but also the commonalities and/or disparities which exist among them. The four evaluation projects, involving a vocational-technical school, a junior high school, and two school districts, are dealt with separately. Each evaluation contains a program description, evaluation strategy and procedure, statistical data, conclusions, and recommendations. The appendices include some of the evaluation devices employed during the course of the four observation periods.

A pilot program, reported by Leonard (16), was designed to aid inner-city Detroit Public School students to raise and broaden their educational/occupational aspiration levels and plan for their future. The project served 15,000 students from seven elementary schools, two junior high schools, and one high school; control schools were selected to match the experimental schools. The concept of developmental career guidance as an ongoing process was basic to the project, and the most prominent objective of the program was to increase the students' awareness or consciousness of the world of work. Other objectives were to help each child develop a realistic, functional self-concept and to coordinate into a smooth working team, all those working with individual students. Guidance consultants were assigned to each project school and para-professionals served as a link to develop a close working relationship between school and community. Activities involved: Counseling; information dissemination; broadening perceptions; consultation; articulation; and working with parents, community, and faculty. School assemblies and field trips were integral parts of the learning process. Evaluation consisted of student attitude surveys toward work/school/career aspirations, student comparison, staff interviews, and external evaluations. Results indicated experimental school populations gained in aspiration levels over control groups.

Perkins (17) reports on the assessment of effectiveness of a career development program implemented in grades K-12 of the Orange County, Florida Public Schools. A total of four components composed the pilot demonstration project. Those components were: (1) the occupational orientation component, (2) the job cluster exploration component, (3) the job skills specialization project, and (4) the occupational guidance, counseling, cooperative work experience, and placement service component.

A project designed to introduce career education into the schools of Pinellas County, Florida is reported by that school district (18). Goals, procedures, accomplishments, and evaluations of the project are reviewed and recommendations are made. Nine pilot schools with combined enrollments of over 8,000 and approximately 400 staff participated in the pilot programs involving elementary, secondary, and post-secondary students. Inservice teacher education, student counseling and guidance, and evaluation components were emphasized in the program. Recommendations included continuation and gradual expansion of the program in the school system with continuing emphasis on guidance and counseling. A separately bound appendix contains instruments used, publicity, committees, quarterly reports, and evaluations of the project.

Shelver (19) reports the Sioux Falls, South Dakota elementary project in career awareness and self-awareness which analyzes the results of pre and post-testing for grades 1-6, for experimental and control groups, and for males and females within individual classrooms. Three experimental and three control classes were identified in each of two elementary schools. The testing instrument for grades 1-3 was the "pictorial self-concept scale for children in K-4," while the self-esteem inventory was selected as the instrument for grades 4-6. The elementary project was developed on the concept that career awareness is related to the total development of the individual. Teachers of both experimental and control groups were all highly oriented toward helping students develop a positive self-concept; however, teachers of control classes were not provided with planned project activities. Results of pre and post-testing indicate greater positive change in feelings about self for the experimental groups. Future recommendations were to: continue the self-awareness program for elementary students, provide adequate materials for teachers, provide the services of an elementary counselor, and arrange for inservice programs for teachers. The document contains 13 pages of supportive graphs and tables.

Shill and others (20) report a three-year exemplary program designed to develop and demonstrate a coordinated and integrated program of career development from the first grade through post-secondary vocational-technical education in a county school system serving a population termed disadvantaged. Heavy emphasis was placed on reorientation of the school concept of occupational education and on a concerted remedial program operated for students identified as potential dropouts. The document includes three 50-page third-party annual evaluations following the project description and a thorough recounting of results and accomplishments. Each evaluation includes background statistical data presented in tables, maps, structural models, samples of printed material and public relations items from local newspapers as well as a program description, evaluation analysis, recommendations, and a summary. Assessments of occupational orientation teachers' and remedial teachers' attitudes; student achievement; curriculum materials; and of teacher, parent, and student attitudes to the career education concept and to the adequacy of public relations efforts are included in the third evaluation.

Mattei (21) reports on a comprehensive career education model in the Bowling Green independent school district system in the State of Kentucky. The elementary school emphases focused on the development of student and teacher self-awareness. The major feature of the program has been the expansion of a practical arts exploratory program at the junior high level. Through an expanded guidance program, emphasis was placed on the career decision-making process. The senior high school staff continued to develop technical training programs of study for secondary students; in a cooperative effort, the employment service and high school counselors conducted a placement program designed to aid students in securing employment. Results and accomplishments and an internal and external evaluation are presented. A bibliography, statistical tables, survey forms, material developed under the project, a listing of occupations, and a career education manual are appended.

Smith and others (22) report the findings of the first year's evaluation of seven career education projects in Minnesota. The report is divided into three parts. Part I concerns the processes used by each of the seven school districts to implement career education concepts. Part II presents information about the product outcomes of the projects in terms of cognitive achievements of students' concepts related to the world of work. Part III describes the relationship between the process and product evaluation in terms of the relative impact the programs had on the students.

Tuckman and Carducci (23) report that, after an extensive review of the literature concerned with evaluating career objectives, a literature with little cohesion, six areas were isolated as crucial indices of the adequacy of career education. These areas are: (1) self-awareness, (2) career-awareness, (3) decision-making skills, (4) overall school behavior, (5) career competencies, and (6) career attitudes and interests. Measures in all six areas should be obtained for the evaluation of career education programs. Preferably, measures should be obtained through experimental and quasi-experimental designs with pre-test data, rather than case study methods. One advantage of using an experimental design is that resulting data is [sic] quantitative and may be statistically analyzed. Special emphasis is given to the equality of the control group with the experimental group because of validity problems related to the maturation bias. The importance of research follow-up is also stressed. Guidelines and recommendations are offered to reduce the amount of error in the evaluation of career education programs.

ACHIEVEMENT OF THE PROCESS OBJECTIVES

It is the purpose of this section to provide, in capsule form, the basic data and documentation derived from reports, surveys, meetings, activities, observations and records of teachers, administrators and project staff, as they worked toward the accomplishment of the process objectives within the eight components. The information supportive of, or concerning, the objectives, to the extent that the data were available and/or useable, is reported by component. Such information is referred to as "data" or "documentation," unless otherwise specifically identified. On the basis of these data and the documentation, findings and conclusions have been drawn concerning the quantitative achievement within each of the components as provided in the project. The findings follow the treatment of each component; the conclusions appear at the end of this section on pages 69 and 70 .

Project Staff Organizational Activities

Pertinent to the development and implementation of the several component parts, which constitute the project itself, are the activities, organizational efforts and interactions of the project staff. Although project staff were involved directly or indirectly in all component activities as the leadership factor in initiating and keeping the project progressing, some of these activities and other work must be cited as explicit achievements. Additionally, the indications of external and internal constraints, over which the staff had little or no control, and which bear not only upon project "process" but, ultimately, upon "product" as well, must also be cited. Some of these constraints are mentioned here and, along with others, have also been reflected in "limitations of the study."

The Leon County Career Education Project was originally scheduled to begin on January 15, 1973, but was unavoidably delayed until June 15, 1973. This delay resulted in scheduling conflicts, inadequate time for staff project organization, for planning the summer workshops and for the implementation of the planning phase of the project in the Fall of 1973. Nevertheless, the project staff did carry out an "Administrative Workshop for Career Education," during the period June 18-22, 1973, for district supervisors, administrators and special service personnel from project schools. The purpose of this workshop was to provide orientation of personnel, identification of major goals of the project and the formation of plans for an in-service workshop for teachers in August, 1973.

An "Orientation and Planning Workshop for Career Education Development" was conducted from August 8, 1973,through August 21, 1973, for teachers, administrators and support personnel from all pilot schools by the project staff. Preparation by the project staff was extensive and included the development of objectives and activities, handouts, instructional materials and data gathering instruments. A collection and display of career education materials was arranged as was a varied program presented by consultants and special speakers.

The results of a questionnaire administered to approximately 85 workshop participants revealed the following reactions to the effectiveness of the workshop:

Question	Response	(%) (N=85)
1. Did each presentation make a contribution to your background of information on Career Education?	Yes	69
	No	12.5
	Not at all	18.5
2. Did you feel involved in all group activities?	Yes	87.5
	No	12.6
3. Were your groups productive in accomplishing the tasks?	Yes	87
	No	13
4. Was the workshop organized in a satisfactory way?	Yes	73
	No	25
	Mostly	2
5. Do you have direction for developing long-range and short-range plans for Career Education?	Yes	83
	No	17
6. How soon do you think you will be prepared to implement some of the Career Education concepts?	September	66
	Six weeks	22
	Other	12

Items 7 and 8 asked teachers to indicate "strengths" and "suggested improvements" concerning the August, 1973,workshop. Responses from the majority of teachers were positive, constructive and meaningful.

An additional questionnaire was administered to participants in an effort to ascertain their reactions to and feelings about career education. The available data do not include responses or reactions but state that the participants expressed positive reaction to career education verbally as well as through the evaluation forms.

A review of the data provided the evaluators indicates a continued and extensive effort by the project staff to develop the career education program. This is evidenced by staff involvement in all components, in organizing, directing and/or participating in meetings for all aspects of program development and involving appropriate personnel from all levels in the respective areas of development. The staff organized numerous workshops, seminars and meetings, provided consultant services from programs throughout the state and assisted in preparation of materials for all parts of the program.

The role of the project staff is implicit in the discussion on each of the several components, although not necessarily always so identified. The school year 1973-74, under the direction and guidance of the project staff, was a year of component development. However, because of the constraints of project teachers' workloads at the end of the planning phase in June, 1974, the inaccessibility of teachers and administrators during the summer, and teacher turn-over in the fall, it was found that additional time was needed for planning implementation strategies. Thus, the period September through December, 1974, was also used for planning and conducting "process" activities, rather than a full effort at program implementation. The implementation of the career education effort in the classrooms was to be initiated in January, 1975, and carried out until May, 1975. For these reasons, the data reflect on "process" primarily during the period September, 1973, to June, 1974, although, as noted above, additional planning time was required during the fall of 1974.

Despite the "planned" implementation of the career education program, on a delayed schedule, for January, 1975, there is evidence that the infusion of career education had been taking place in the project schools as early as November of 1973. Examination of documentation and other data also point to the implementation of career education concepts and activities on an increasing basis prior to January, 1975, and, thus prior to the "pre-test" administration. For example, of eight reports of classroom career education activities, five report on such activities which were carried out between the period of November, 1973, and February, 1974. Attention is drawn to this fact only to point out the apparent problems that may be encountered, with test data on a pre-post test design under such conditions.

Findings

1. The project staff devoted an extensive amount of time during the process phase in planning, organizing and coordinating the career education project once it was in motion and was intricately involved with personnel of all levels in the developmental activities pertaining to all components.

2. There is no evidence that prior planning involved considered assessment of the situation with regard to a school being ready to participate in the project.

3. There is no evidence that any effort was made to adequately "set the stage" for a "total involvement" commitment needed for carrying out a project of this type.

4. Data indicate that a majority of participants of the "Orientation and Planning Workshop" found it profitable, effective and worthwhile, and that they reflected a positive attitude toward career education.

5. There is no evidence of a "planned program of projected progress" to effect an organized approach to program development.

6. There is evidence that there was infusion of career education concepts and activities prior to the time of planned implementation.

Component 1 - Elementary School Program (K-5)

> Objective: Developing an elementary program for grades K-5 to increase self-awareness and career awareness of students and to provide the skills necessary to relate self-concept to the broad range of options open to them in the world of work.

As previously indicated, project elementary school personnel were involved in two orientation and planning workshops in June and August of 1973. During the school year 1973-74, elementary school curriculum coordinators met regularly with the project curriculum coordinators and the guidance coordinator. Numerous meetings were required of the total group as well as individual sessions for purposes of communication and continuation of planning. Curriculum coordinators from the several schools, in turn, worked with their own teachers in curriculum and instructional materials adaptation. The data indicate that the specific purposes of the meetings were to:

1. Define objectives for the elementary program
2. Review materials needed to attain objectives
3. Incorporate career education activities and materials in existing curriculum on a trial basis.
4. Develop a total program for implementation by September, 1974.

The data indicate that many successful career education activities were undertaken during this planning phase and that they were to be continued in the on-going program. Documentation provided the evaluators gives examples of agendas and minutes of meetings held by the elementary school groups.

In keeping with the stated program objectives, the elementary program emphasized the elements of Career Awareness, Self Awareness and Values Clarification. It was determined that these elements were to be fused into the existing curriculum at the several project schools. It was further determined that the FAIS (Fusion of Applied and Intellectual Skills) program would best meet the needs of program implementation of the three selected elements for K-5. The FAIS objectives were adopted as the elementary performance objectives.

The FAIS program was fused into the existing curriculum through the assignment of the various FAIS Learning Sequences to the different grade levels, K-5. Thus, with some lesson adjustments, the entire series was assigned on a sequential basis to the several grade levels.

Inasmuch as the FAIS program is primarily directed to affective learning, an effort was made to identify means of emphasizing awareness of the broad scope of occupations relative to the fifteen occupational clusters and to provide students with cognitive and psychomotor experiences through supplementary materials. This was accomplished by teachers and curriculum coordinators by the development of a series of procedural steps to expand the scope of the program. In effect, a detailed examination of the FAIS materials and resource units from other Florida pilot projects, as well as LOOM (Learner Oriented Occupational Materials), was made and selected materials were correlated with the FAIS materials at each grade level. Sequencing was effected to avoid duplication and to assure variety. Additional resource units as well as related audio-visual materials were to be selected by each school.

Each project school was provided with multiple copies of most units written by other Florida pilot projects in career education, and with two sets of LOOM units and film strips. In addition, supplementary commercial materials were provided to all schools.

The data indicate that staff curriculum personnel continued their efforts in working with project school administrators, curriculum coordinators, and faculties at all levels, to further develop segments of the program, during early months of the 1974-75 school year.

Findings

1. The data indicate that project staff, curriculum coordinators and teachers spent many hours as groups and individually in the planning and development of the elementary phase of career education.

2. The data indicate that the specific learning materials were planned and developed with care in an effort to meet the stated objectives and to

avoid duplication.

3. The data indicate that materials previously developed in Florida projects were incorporated into the new programs of this project.

4. Documentation of curricular and instructional materials indicates the apparently adequate and effective dissemination of such materials.

Component II - Middle School Program (6-8)

Objective: Developing programs for the middle school level, grades 6-8, to provide career education and meaningful exploratory experiences in the 15 occupational clusters as they relate to the students'expanding self concept.

Middle school personnel were participants in the two orientation and planning workshops already mentioned. Growing out of the August,1973, workshop,there developed a tentative plan for implementing career education concepts, on a trial basis, during the planning phase. During this period, project school personnel and project staff had numerous group meetings to exchange ideas, review materials, discuss policies for ordering materials, reporting activities and planning workshops for more detailed program planning.

The data indicate that it was difficult to communicate with personnel and to coordinate meetings, in many cases, because of the extensive demand on project school personnel's time during the year. Many schools were involved in accreditation matters, comprehensive planning and multiple pilot projects concurrently.

In spring of 1974, a 12-hour workshop, spread over three weeks, was held for 30 middle school representatives for purposes of determining the success of the trial program and the direction which the further development of curriculum should take. As a result of the workshop, it was concluded that, although many worthwhile career education activities had been undertaken, the trial plan was not successful since full participation was lacking, the program had no identifiable scope and sequence and the clusters had been inappropriately placed.

In an effort to find a new direction for the middle school program, the FAIS program for grades 6-8 was reviewed by workshop participants. It was found that the FAIS program emphasized those career education elements included in the project model and those which had been included in their original plans and program objectives and materials could be implemented in the existing curriculum. Therefore, the FAIS curriculum design for 6-8 was developed as a continuum with the design for K-5, and the FAIS objectives, 6-8, were adopted as the middle school performance objectives.

Subsequently, workshop sessions were held to develop a plan of implementation through which the FAIS materials were correlated with the social studies and language arts areas. Programs were also developed for other components of the career education curriculum to complement the FAIS approach. Thus, career education elements were related to the areas of mathematics and science. The fifteen occupational clusters were assigned to all subject areas for exploration; pre-vocational programs included diversified education, business education, industrial arts and home economics. The guidance effort was expanded by identifying objectives, activities and resources to support and supplement the FAIS program.

Findings

1. The data indicate that project staff, curriculum coordinators and teachers spent extensive hours on workshop and other planning sessions to develop the middle school program, especially subsequent to March, 1974, in an effort to re-direct the unsuccessful initial effort of the career education program.

2. The data indicate that school personnel commitments were such that adequate planning time for the career education project was not always available and caused the project effort to lag.

3. The data indicate that materials previously developed in Florida projects were incorporated into the new programs of this project.

4. An examination of the curriculum approach finally adopted indicates a well rounded and inclusive program of career education infusion at the middle school level.

Component III - Secondary and Post-Secondary School Program (9-14)

Objective: Developing programs for grade levels 9-14, that extend in-depth career exploration and job preparation experiences, including the utilization of work experience and cooperative education opportunities; the experiences would provide skills necessary for success in an occupation or subsequent educational program.

Leon High School

Leon High School personnel participated in the two orientation and planning workshops previously mentioned in this report as having been held in June and August, 1973. However, since there were several changes in the school's administration at that time, representation in the administrative workshop was limited. Several faculty and guidance representative attended the August workshop, and as a result, a Leon High School Coordinating Committee Plan was developed.

A number of committees worked together for total curriculum planning and career education was identified as the focus of the 1973-74 Leon High School Comprehensive Plan. In addition to the development of this plan, innumerable meetings were held with school support and teaching staff in groups and on an individual basis. These meetings were concerned with orientation for those who did not attend the workshops, identification of program and student objectives and a review of resource materials.

According to the data furnished, it was decided that during the planning year, monthly reports would be submitted by faculty members and guidance personnel for the purpose of identifying the existing scope of career education activities in the school program and to describe results of experimental activities. The information states that through this process it was determined that many excellent activities were in effect and that the primary needs for program development were to identify a scope and sequence for the activities and to assure that all students were receiving similar experiences. There is no evidence in the data furnished the evaluators that these reports were written or submitted; nevertheless, the data do indicate that a workshop was held in early 1974 for purposes of refining program and student objectives and to develop scope and sequence for the career education activities.

Since all departments were not represented at the workshop it was not possible to plan a total program; however, a tentative program model was developed. The eight elements of career education were accepted as essential to the program, with emphasis placed on Self-Awareness and Values Clarification. Each of the eight elements was placed at a specific grade level relative to student developmental needs, and a model was designed as a basis for program planning.

Workshop participants realized that these elements needed to reach all students at each grade level. However, the constraints of the existing curriculum and scheduling methods, presented obstacles to the identification of student objectives and implementation strategies. In an effort to facilitate the process, project staff identified program and student objectives based on the eight elements of career education and designed a tentative implementation plan. Departmental meetings were held and faculty members completed a career unit outline for each course offering. These included objectives, activities and the necessary resources.

In addition to the school-wide activities, several individual teachers produced career-related curriculum materials during summer workshops. These included teacher and student guides which incorporated career education activities into basic biology, BSCS Biology and ISCS Science, German I-IV and Spanish I-IV.

Area Vocational-Technical School

Lively Vocational-Technical School had representation in both workshops conducted in June and August, 1973. However, participation was limited due to other prior commitments.

Following the opening of school, an orientation meeting was held for department heads and several conferences were held with administration, individual teachers and departments. Through these efforts a direction for initiating the school's career education program was identified. Through committee effort, objectives were determined and a workshop was planned to work out the details for the initial phase of the program. The central purpose was to develop a transportable career education model for integrating guidance, employability skills and the compensatory skills of mathematics and language arts into a vocational career program. Child Care was selected as the model for this program.

The workshop, conducted early in 1974 in six two-hour sessions, was attended by eight participants from the Lively School. These eight persons were assisted by curriculum coordinators, and the guidance coordinator. The data indicate that the workshop accomplished its task and that parts of the model were implemented. Plans were then made to implement this model into other vocational programs in the school year 1974-75.

Findings

1. The data indicate that participation in some of the organizational meetings and in workshops and other meetings was frequently quite limited.

2. There is evidence that those personnel who did participate in work sessions, meetings and conferences devoted many hours and days to the development of the materials for career education implementation.

3. There is evidence in the data which points toward a lack of cooperation and commitment to assure adequate attendance and participation in many instances.

4. There is evidence that some major constraints were not anticipated and thus not planned for or effectively counteracted.

5. Examination of data indicates a significant contribution on the part of some teachers to the planning and development of the program and also to the writing of units and other instructional materials.

6. Examination of available teacher prepared materials evidences extensive ability and real concern for the task of program development.

Component IV - Counseling and Guidance Services

Objective: Continuing and expanding counseling and guidance services to students at all grade levels.

Elementary Guidance Program

At the beginning of the project, only one of the five elementary schools had a counselor on its staff. One counselor was therefore assigned to each of the four schools, and four full-time counselor interns were assigned to each of the four larger elementary schools.

Since the guidance program was new to most schools, the counselors and interns met for a one-day orientation with the Coordinator of Guidance during the workshop of August,1973. During the remainder of the workshop, they met with teachers in all curriculum sessions to develop an understanding of the curriculum and to develop a working relationship with the teachers.

An inservice education program was developed and conducted through bi-monthly meetings for all counselors and interns, at which new materials and activities were reviewed for implementation as a part of the overall development of a program of guidance services. Counselors and interns completed time-use records each week for purposes of analyzing the various guidance activities employed and the time given to each. This provided a basis for continuous evaluation and for feedback to administrators and project staff. Data made available to the evaluators did not include completed time-use records of the counselors, therefore, no analysis or assessment of their activities was possible. However, the data do indicate that, at the elementary level, a time accounting system was used to help identify the time allotted to certain types of activities and to make program adjustments. In addition, the frequency of types of activities was reported, and through the use of these forms of reporting, it was determined that the program objectives were being met.

The philosophy for the elementary guidance program was rewritten and additional implementation strategies were developed. A next step was the systematic listing of guidance activities which would reinforce each learning sequence of the FAIS program.

Middle School Guidance Program

The two project middle schools each had an established guidance program with two counselors and one occupational specialist at each school. One counselor from each school attended the August,1973,workshop and participated in the curriculum sessions to assist in building supportive guidance services into the program. Occupational specialists also had a part in program planning and implementation.

Counselors and occupational specialists attended the Middle Schools' Planning Workshop to assist in planning, reviewing and selecting materials. Subsequently, a plan was drawn for implementing the program which was based on FAIS, "A Valuing Approach to Career Education."

In developing goals and objectives for their middle school guidance program, counselors adapted the four basic goals of the State Model for Middle School Guidance. Under these goals, student outcomes were written which were designed to be achieved through classroom guidance related activities as well as activities directed by the counselors. These objectives reflect a program closely related to the planned curriculum.

High School Guidance Program

Four counselors and one occupational specialist formed the counseling staff in an established program at Leon High School. Through the career education project an additional counselor and an occupational specialist were added to the staff.

Two of the counselors and the two occupational specialists attended the August ,1973 ,workshop and participated in the curriculum sessions. At a later date,one person from each major subject area and one counselor participated in the high school planning workshop to develop a career education program for all the high school students.

In subsequent work sessions the counselors developed the program objectives for the implementation phase together with suggested activities. Anticipated student outcomes were developed during the summer workshop in 1974. This provided a developmental program on interpersonal skills, values clarification and career planning designed to reach all students.

Area Vocational-Technical School Program

An established program with three counselors was in operation at this school at the beginning of the project. The testing and evaluation of incoming students was an assigned role which required a large percent of staff time.

The guidance personnel were involved in the workshop at which a model for "Employability Skills and Guidance Activities" was developed as a component of the transportable model format. This format was to be used to develop similar programs in various shops and vocational programs. During this planning period, materials were selected and ordered to assist in the implementation of group guidance activities in the classroom.

An examination of the guidance goals and objectives for each of the levels, elementary, middle and high school, indicates a comprehensive plan to have been developed in each instance. At the elementary level, ten major goals and objectives were established and for each one were listed samples of activities, evaluation criteria and, as appropriate, the correlating State Standard Number. Middle school guidance data indicated four major goals with appropriate suggested activities and outcomes set forth. The Leon High School guidance program outline indicated 12 major objectives, suggested activities and state standards as applicable. There were no data furnished regarding such developmental activities at Lively.

Findings

1. The data indicate that the Guidance Coordinator planned exten-

sively to involve the guidance personnel in an effort to effect a sound program at all levels, providing planning sessions and workshops at periodic intervals.

2. An examination of data indicates that, for the most part, counselors and occupational specialists put forth a considerable effort, as judged by the programs developed and the number of joint and small group meetings which were held.

3. The data indicate, that in many instances, there was rather limited involvement by counselors in workshops and in-service education sessions.

4. The data concerning the elementary, middle and high school programs indicate that objectives were met and that students reacted favorably to counselors'and occupational specialists' efforts.

5. There is little evidence in the data supporting the efforts of the counseling and guidance function at the Area Vocational-Technical School.

Component V - Career Information, Placement and Follow-Up

Objective: a. Planning and providing career information and placement through coordinated efforts of the placement component of the Career Education Center counselors, occupational specialists, teachers and cooperating agencies.

b. Planning, providing and conducting follow-up studies and providing feedback of pertinent information to the school system for development of plans to meet present and future needs of students.

Following the Orientation and Planning Workshop in August, 1973, and several subsequent meetings with District and Department of Education Consultants, the objectives for the placement and follow-up component were refined as stated above. Subsequently, project staff conducted a search of the available literature; descriptions of operational placement and follow-up programs located in various parts of the nation were reviewed. The State law, Department of Education regulations and working copies of the

State "Guidance for Placement Services and Follow-up Studies," were analyzed. The model designed for Leon County followed closely upon the State guidelines.

A proposal for the implementation of objectives for "placement and follow-up," was designed through a series of meetings involving representatives of the Chamber of Commerce, project school counselors, school administrators, teachers and occupational specialists. Data indicate that there was little or no involvement on the part of the district administrative level. As a result of these meetings, a tentative flow chart, working forms and descriptions of functions and process were developed. The proposal was recommended to the District Superintendent but was rejected as being too broad in scope and too costly. Following the rejection of a second proposal, a third proposal, developed by project staff and district school personnel, was approved in June, 1974. An examination of this model indicates an apparently thorough, sound and workable plan for the placement and follow-up activities required by legislation. Supporting the model itself is further detailed information on the duties and responsibilities of a Director of Information Placement and Follow-up, a Career Placement Officer, a Career Counselor and the Occupational Placement Specialist.

As a part of the overall aspect of career education, and especially to place emphasis on the matter of placement and follow-up, the role and responsibilities of an advisory committee were developed and an advisory committee formed. Data indicate that because of numerous constraints, primarily a lack of time, it was impossible for the first committee to function. Subsequently, in June,1974, the committee was reconstituted. However, data from December,1974, state that the Career Education Advisory Committee continued to be "disfunctional" in spite of efforts of project personnel and the enlistment of a second chairman.

Project staff and placement and follow-up personnel developed a number of report and follow-up forms for purposes of assisting students and maintaining records of service. These include a monthly report form on placements and follow-up to be submitted by each high school and post secondary school, a pre-graduation information form for student completion, an exit interview form, a follow-up survey instrument and a number of survey forms on student interests and on job availability and industrial visits.

The following data from the Vocational Technical Center and the three high schools, for the school year 1974-75, shown as a district total, indicate, to the extent that the data are accurate, that the placement and follow-up program is operating.

	District Total
1. Number of school dropouts	592
2. Number of school dropouts requesting placement assistance	689
3. Number of school dropouts placed in jobs, other educational programs or helping agencies	506
4. Number of high school graduates and Voc-Tech School completions requesting placement assistance	157
5. Number of high school graduates and Voc-Tech School completions placed in jobs or other educational situations	113
6. Number of employer contacts reported by school placement personnel	652

Beginning in January, 1974, bi-weekly meetings were held for project school counselors, occupational specialists and follow-up staff to plan for a system of reporting placements between the project schools, the vocational-technical center and the career placement office as well as for the development of the forms indicated earlier. The data indicate that, as these staff members become more involved in planning the placement and follow-up services, there developed a greater awareness of the problems involved and the need for a centralized information, placement and follow-up system. This prompted project staff to rework and recommend again a total system, centralized placement and follow-up design, which was adopted in June,1974, as previously stated.

Findings

1. The data indicate that the plan evolved for a placement and follow-up design is workable and effective and that it has been implemented in the schools.

2. There is evidence that early planning for this component was not sufficiently detailed or complete, and failed to recognize the need for district staff involvement from the outset.

3. The data indicate that effective plans for the formulation and the operation of the advisory committee were not developed and/or implemented.

4. The data indicate that school and project staff personnel devoted many hours of work to the development and implementation of the placement and follow-up component.

Component VI - In-Service Education Programs

Objective: Providing in-service programs in the areas of orientation, planning and implementation of career education for teachers, administrators and supportive staff.

Information concerning the two major in-service education efforts, the "Administrative Workshop" and the "Orientation and Planning Workshop" has been provided earlier in this section. Data have also been furnished concerning certain curriculum development efforts through the workshop approach in the components for elementary, middle and high school/vocational-technical schools.

The extensive effort of the project staff and the school personnel who involved themselves, can only be reflected by the summarization of the many in-service programs conducted, reflecting the number of participants, objectives and days involved in each undertaking.

Leon District Career Education Project
In-Service Programs

NAME/DATE	NO. OF PARTICIPANTS	OBJECTIVES
Administrative Workshop June 1973 (5 days)	40	1. To orient district personnel to Career Education project.
Orientation and Planning Workshop August 1973 (10 days)	105	1. To orient project school personnel to project. 2. To introduce basic Career Education concepts. 3. To develop a tentative plan for implementing Career Education in existing curricula.
Elementary LOOM Workshops March-May 1974 (1 day)	22	1. To orient participants to LOOM materials and "Hands-on" activities. 2. To plan implementation of related activities.
Elementary LOOM Workshops August 1974 (1 day)	85	1. To orient remaining elementary project school personnel to LOOM materials and assist them in planning for implementation of related activities.
Middle School LOOM Workshops Feb.-April 1974 (1 day)	23	1. To orient participants to LOOM materials and "Hands-on" activities. 2. To plan implementation of related activities.

Leon District Career Education Project
In-Service Programs (Continued)

NAME/DATE	NO. OF PARTICIPANTS	OBJECTIVES
Middle School LOOM Workshops August 1974 (2 days)	30	1. Orient remaining project middle school personnel to LOOM materials and assist them in planning for implementation of related activities.
Elementary School FAIS Workshops Nov.1974-March 1974 (1/2-1 day each)	125	1. To provide in-depth study of FAIS program and materials for all pilot elementary school personnel, to facilitate implementation of program in existing curriculum.
Middle School FAIS Workshop March-April 1974 (2 days)	31	1. To introduce FAIS program and plan for implementation in existing program. 2. To select related activities to supplement FAIS program.
Middle School FAIS Workshop August 1974 (1 day)	29	1. To finalize implementation plans and orient remaining faculty members to program. 2. To distribute required resource materials.
Middle School Science Workshops July 1974 & August 1974 (5 days each)	7	1. To develop Career Education/Science curriculum guides. 2. To develop plans for implementing the program.
Leon High School Planning Workshop Feb.-April 1974 (2 days)	13	1. To develop over-all program plan and implementation strategies for project high school.
Leon High School Foreign Language Workshop July 1974 (3 weeks)	2	1. To develop teacher and student curriculum materials relating foreign language skills (Spanish and German) and Career Education concepts.
Leon High School Science Workshops July-August 1974 (4 weeks)	3	1. To develop teacher and student curriculum materials relating Basic Biology, BSCS Biology and ISCS Science and Career Education concepts.
Leon High School Guidance Workshop June-July 1974 (10 days)	7	1. To plan guidance activities to reach more students. 2. To develop guidance activities for use of classroom teachers.

Leon District Career Education Project
In-Service Programs (Continued)

NAME/DATE	NO. OF PARTICIPANTS	OBJECTIVES
Lively Vo-Tech Workshop Jan-Feb 1974 (2 days)	8	1. To develop a transportable Career Education model for incorporating guidance activities, employability skills and compensatory mathematics and language arts skills into career programs.
Human Development (Magic Circle) Workshop September 1973	18	1. To introduce participants to Human Development Program ("Magic Circle") activities and materials which relate concepts of human development to classroom activities.
Middle School FAIS Workshops May 20,22,27,29,1975 June 3,5,1975	23	1. To review and evaluate FAIS program. 2. To review implementation plan and recommend revisions. 3. To study individual FAIS lessons and revise where necessary.
Placement and Follow-Up August 21,22,23,1974	37	1. To establish the roles and responsibilities of the school counselors, occupational placement specialists, and district coordinator for placement and follow-up model. 2. To adopt and/or develop the forms necessary to implement the district placement and follow-up model. 3. To develop the competencies and skills necessary for using the Florida State Employment Service's Job Data Bank.

Summaries of workshop evaluations, reflecting teachers' reactions, opinions and comments concerning a majority of the workshops listed above were examined. The format for all questionnaires was identical, consisting of seven questions:

1. Was the time of the meeting satisfactory?
2. Was the workshop organized in a satisfactory way?
3. Was presentation adequate to accomplish objectives?
4. Did the workshop accomplish the task(s) set in stated objectives?
5. What were the strengths of the workshop?

6. What improvements would you suggest?

7. a. Skills achieved
   b. Materials
   c. Consultants
   d. Other

Elementary level workshops: (Total) (N=199)

Item	Reaction/Comments		No Response
1	Yes 187	No 11	1
2	Yes 199	No 0	0
3	Yes 194	No 3	2
4	Yes 192	No 5	2
5	Positive		
6	Constructive		
7a	Postive identification		
b	Positive		
c	High Positive		
d	Positive		

Middle school workshops: (Total) (N=70)

Item	Reaction/Comments		No Response
1	Yes 70	No 0	0
2	Yes 69	No 1	0
3	Yes 61	No 9	0
4	Yes 66	No 4	0
5	Positive		
6	Constructive		
7a	Positive identification		
b	Primarily Positive		
c	High Positive		
d	No Comment		

Leon High School workshops: (Total) (N=11)

Item	Reaction/Comments		No Response
1	Yes 11	No 0	0
2	Yes 11	No 0	0
3	Yes 10	No 0	1
4	Yes 9	No 1	1
5	Positive		
6	Constructive		
7a	Limited identification		
b	Positive		
c	Positive		
d	Positive		

Lively Vocational Technical School: (Total) (N=7)

Item	Reaction/Comments
1	Yes 7 No 0
2	Yes 7 No 0
3	Yes 7 No 0
4	Yes 7 No 0
5	Positive
6	Constructive
7a	Limited Positive
b	Limited Positive
c	Limited Positive
d	Limited Positive

Findings

1. The data indicate that an extensive number of meetings, workshops and other work situations were organized and carried out for purposes of developing the several phases of the project.

2. Examination of teacher responses to the questionnaires concerning the workshops indicates, generally, a highly positive reaction to the efforts of the project staff in organization, and in meeting objectives.

3. Examination of teacher responses to the questionnaire concerning the workshops indicates constructive suggestions and statements of positive benefit almost without exception.

4. Examination of the teachers' responses to the questionnaires indicates no major differences in responses between teachers of the various school levels.

5. Teachers' responses to the questionnaires reflect a positive attitude toward career education and to the expertise of the workshop leaders and consultants.

Component VII - Community Development

Objective: Developing a program of school-community involvement to provide continuing educational services to all people.

The data indicate that the project staff made numerous attempts to actively involve members of the community in the Leon District Career Education Project from the inception of the project. Some of these efforts were as follows:

1. Contacted 286 community leaders, by letter from the Superintendent of Schools, inviting them to participate in the August, 1973, workshop.

2. Sent invitations to representative parent groups from project schools to attend the August, 1973, workshop.

3. Publicized the new career education program through several articles in the local newspaper and via local television.

4. Conducted a county-wide job opportunity survey and sent inquiries for information to several hundred businesses and industries.

5. Project staff made a number of presentations on career education to civic groups and other organizations and agencies in the community.

The data indicate, however, that despite the invitations to the August workshop, very few, if any, of those who were invited did attend the workshop. Additionally, the response to the county-wide job opportunity survey was to little or no avail since only 12% of those contacted responded.

Subsequently, though, the career education project received the full support of a previously established service group, the Leon School Volunteers (LSV's). This organization of parents and other community representatives gave of its time, talents and energies to assist and to supplement the educational experience of students at all levels, K-12. The group served as career consultants, enlisted others to do so too, and provided assistance to teachers and students in many ways. The data also indicate that the elementary schools used the service of LSV more extensively than the middle and senior high school because each secondary school was provided an occupational specialist to assist teachers in planning for field trips, obtaining resource speakers and providing occupational and career information. The LSV program and the occupational specialists program were on-going when the career education project began. To develop a means of providing project schools with this service would have been a duplication of effort. Therefore, the career education project worked cooperatively with both groups in expansion of their programs.

A parent member of the LSV program served on the project steering committee and assisted with development of the career education program planning.

The project senior high school had, for many years, held a Career Day one full day each school year. The project staff assisted in the enlargement and operation of this activity. All students and teachers were involved.

The Information Placement and Follow-up component of the project developed a system for providing employment services to school leavers with the Florida Employment Service.

Findings

1. The project staff did make an effort, early in the project, to bring about community involvement.

2. There is no further evidence of any aggressive action on the part of the project staff to intensify involvement beyond that of the LSV.

3. The data reveal no information concerning effectiveness of or reactions to the career program from parents or other citizens.

Component VIII - Materials Development and Dissemination

(Although not expressly stated as an objective, the matter of materials development and dissemination was of significance in the development and implementation of the career education project. For this reason it was considered of sufficient impact by the evaluators to be included as a component.)

An examination of the data provided reflects that, throughout the project, extensive efforts prevailed, under the direction of the project staff, to promote and assist in the development of career education materials and to obtain, from all sources possible, such materials already prepared for dissemination to project schools and teachers. Certain such activities have already been cited in other components; there follows here a summation of some of the additional activities involved in this development and disseminating materials:

1. At the inception of the project, an extensive review and selection of guidance and curriculum materials and professional literature was undertaken. These included materials from other career education projects throughout the country, commercially prepared A-V materials and texts, Florida Department of Education resource guides, and FERIC (Florida Educational Research Information Center) materials.

2. Frequent newspaper articles, TV appearances, magazine articles, slide tape presentations and letters were prepared for purposes of informing the public about career education.

3. A system for disseminating AV materials from the career education center was devised to serve project schools. Included were films and video tapes, procured on a loan basis,and filmstrips and cassettes purchased with project funds to meet specific needs.

4. Guidance materials, including materials from other career education projects in the state, curriculum materials - FAIS, LOOM - and employment related mathematics materials for the high school, were provided to project schools.

5. Many visitors from schools in other districts took occasion to observe the development and implementation of the program. Similarly, numerous requests for material developed by the Leon project were filled for teachers from other districts.

6. The purchase of printing equipment permitted the reproduction and dissemination of some materials at a great monentary saving.

7. An examination of periodic "Itemized Lists of Materials Distributed to project Schools," reveals a careful, in-depth selection of relevant materials in reasonable quantities, for appropriate levels of the program. The extensive lists of items indicates the massive effort made in providing diversified and effective materials.

8. Florida VIEW (Vocational Information on Education and Work) has been expanded in Leon County and includes service for the project schools. Scripts and aperture cards for 442 job descriptions were available along with information on local training and 66 navy jobs. The data indicate that VIEW has been used extensively and has been successful in informing students about careers.

Project staff, curriculum coordinators and especially teachers themselves, were involved in the development of materials for their respective classroom or student-level situations. Some of the major curriculum and career education materials developed by the Leon District Project are listed below.

Elementary Level

---"Description of Elementary Career Education Program"

Middle School Level

---"Career Education: Cobb and Raa Middle Schools."
(Description of Middle School Program)

---"Career Education Syllabus for Raa Middle School Science Teachers"

---"Implementation of Career Education Elements in the Middle School Science Curriculum" - Cobb School

Middle School Level (Continued)

(Teacher's guides relating the exploration of selected occupations/careers to the existing science continuum.)

High School Level

---"Leon High School Career Education Plan Book"
(A description of the High School Program)

---"Career Guide for Biology: Textbook Correlation, The Earth: It's Living Things"

---"Career Guide for Biology: Textbook Correlation, High School Biology, BSCS, Green Version "

---"Career Guide for Science: Course Correlation, Intermediate Science Curriculum Study (ISCS Science)"

(Teacher guides and individualized student guides fusing career education elements with the academic science courses)

---"Career Guide for Foreign Languages: German I-IV"

---"Career Guide for Foreign Languages: Spanish I-IV"

(Teacher guides and individualized student guides fusing the teaching of target language culture, vocabulary and syntax with selected occupations in five occupational clusters)

Lively Vocational-Technical School

---"Transportable Career Education Model Formats Relating Compensatory Skills, Guidance Activities and Employability Skills to Career Programs"

(A model for integrating guidance activities, employability skills and the compensatory skills of mathematics and language arts with a vocational career program -- re Child Care)

Elementary Level

---"Fun Things To Do"

(Group Guidance Activities)

High School Level

---"Source Book of High School Guidance Activities"

---"Teacher's Handbook For Guidance Services"

Findings:

1. The project staff vigorously pursued a policy of materials development and dissemination throughout the time of the project.

2. Teachers responded positively to involvement in the development as well as in the implementation of career education materials.

3. Materials prepared under previous State of Florida programs, as well as some in other states were found to be useful and effective, thus avoiding unnecessary duplication of effort in materials development.

4. Project staff made a continuing effort to inform the community about the career education program through various media. This effort was also extended to many out-of-county visitors.

Conclusions:

1. The delay in initiating the project and the timing of its expiration appear to have had negative effects on bringing the project into motion initially and in moving it into the implementation stage at a later point.

2. More specific plans, within a time frame, for the completion of specified tasks and a commitment of human resources to the tasks, might have avoided or minimized numerous constraints which lessened the project's effectiveness.

3. Responses by participants in the August workshop for teachers indicate that approximately 80% of them were positive in their reactions to its effectiveness.

4. The project staff appears to have provided effective "service" to the project schools and teachers in terms of organizing meetings, providing materials and equipment and in creating situations for involving people in areas of development and responsibility.

5. It appears that insufficient effort was made to prevent "contamination"

of students and teachers and to maintain and conduct the project in a manner normally required in an experimental/control design.

6. It appears that participation on the part of the Lively Vocational-Technical School and its staff was minimal and that the Tallahassee Community College made no effort at participation in the career education project.

7. There is evidence of a positive nature concerning the value and effectiveness of career education materials prepared through other projects, viz.,FAIS and LOOM, used in the Leon District Project.

8. The variety, quality and quantity of career education materials, both commercially obtained and locally prepared, were adequate for implementation of the program. Some problems of dissemination of information and materials, at times, caused constraints.

9. Materials produced, and time devoted to the project, evidence a high level of teacher ability and sincere interest in the development of the project.

10. The planning and personal involvement with students in the guidance function by the Guidance Coordinator and the majority of counselors and occupational specialists reflects an effective beginning to the provision of "career counseling," at the K-12 levels.

11. Although early, detailed planning of placement and follow-up was to some degree ineffective, the plan ultimately developed was effective, but not fully implemented.

12. Although based on limited responses, the in-service programs developed by project staff appear to have been successful and effective to the extent that they were participated in by teachers and others.

13. Community involvement by project personnel was not vigorously pursued, although some successful inroads at participation were made.

ACHIEVEMENT OF THE PRODUCT OBJECTIVES

ACHIEVEMENT IN THE ELEMENTARY SCHOOLS
GRADES K-5

The Career Education programs, developed in Leon District during the period June 15, 1973, and December 31, 1974, were introduced officially into the classrooms in January, 1975. It was at this time that the pre-tests for the experimental/control evaluative design were administered. Nine public schools were involved, of which five were elementary(grades K-5) schools. Of these five, two, Ruediger and Timberlane Elementary Schools, were involved in the product evaluation and are referred to as experimental or project schools. Two other elementary schools, Caroline Brevard and Astoria, served as control or non-project schools for testing purposes in the pre-post design.

Enrollments in the elementary schools involved in the project and/or testing were as follows:

School	Enrollment	School	Enrollment
Concord	88	Timberlane*	776
Ruediger*	647	Caroline Brevard*	562
Sealey	760	Astoria*	730
Sullivan	597		

* Schools used in pre-post testing

The purpose of the evaluation was to determine, as based upon the objectives set forth in the project for the elementary level, whether experimental (project) students, as compared to control (non-project) students, made greater gains toward acquiring competencies identified in the commonly accepted career education elements. Thus, an effort was made to ascertain answers to the following questions:

Did students in the career education programs (experimental group), as compared to students enrolled in traditional education programs (control group):

1. develop a greater capacity for self-awareness?
2. develop a greater ability in clarifying personal values?
3. demonstrate greater facility at decision making, or at career decision making?
4. acquire more knowledge about careers?
5. develop a greater awareness of the relationships between academics and career development?
6. develop a greater awareness of the economic aspects of careers?

Instrumentation:

Two instruments were administered at the elementary level. A pre-test was administered in January, 1975, and a post-test was administered in May, 1975, with both instruments. The first instrument, the Worker Information Scale, (Modified) Level 1, for the 1-2 grade group and Level 11 for the 3-5 grade group, was completed by the students. This instrument includes questions about different occupations in an effort to measure knowledge about different jobs. Specific questions, 12 at Level 1, and 16 at Level 11, are asked about the tasks performed and the training necessary for a person with a certain job. Pictures and words are used in each of the five parts of each question.

Worker Information Scale

Data for grades 1 and 2, on the Worker Information Scale, Level 1, indicate a significant change by the total group from the pre-test to the post-test. However, the data, treated by analysis of variance, did not indicate a statistically significant difference in change from pre-test to post-test between the experimental and control groups. The means do indicate that the control group gained more than the experimental group, but not significantly more. Pertinent data are shown in Table 1.

TABLE 1

GROUP MEANS AND N FOR THE WORKER INFORMATION SCALE (MODIFIED), LEVEL I, EXPERIMENTAL AND CONTROL GROUPS, GRADES 1 AND 2, PRE AND POST-TESTS, 1975, LEON DISTRICT

		Pre-Test	Post-Test
Experimental	Means	48.10	49.19
	N	102	106
Control	Means	46.42	49.28
	N	97	107

Treated by analysis of variance, data for grades 3, 4 and 5, on the Worker Information Scale, Level II, indicate a significant difference between total pre-test group scores vs the total post-test group scores and the total experimental group scores vs the total control group scores. However, the difference between the experimental group pre-post change and the control group pre-post change was not significant. Pertinent data are shown in Table 2.

TABLE 2

GROUP MEANS AND N FOR THE WORKER INFORMATION SCALE (MODIFIED), LEVEL II, EXPERIMENTAL AND CONTROL GROUPS, GRADES 3, 4 AND 5, PRE AND POST-TESTS, 1975, LEON DISTRICT

		Pre-Test	Post-Test
Experimental	Means	62.67	64.00
	N	171	173
Control	Means	60.73	63.03
	N	156	155

Teacher Observation Scale of Student Behaviors

The second instrument, used at the K-5 grade level, was the Teacher Observation Scale of Student Behaviors and was completed by the teacher for each of the grade levels, K-5. The eighteen items of the scale are grouped into five sections: "self-awareness," "career awareness," "self-responsibility," "problem solving/decision making abilities" and "other traits." Teachers were asked to rate each of their students as being in one of the following four categories relative to the several traits indicated:

1. very much like this student
2. somewhat like this student
3. a little like this student
4. not at all like this student

The instrument was completed for 334 students in the experimental pre-test group, and 323 students in the control pre-test group, and 300 students in the experimental post-test group and 322 students in the control post-test group. A Chi Square was calculated on each of the items, although total ratings in some cells might have been considered insufficient for meaningful analysis. Data were treated for the K-2 grades as one group and grades 3, 4 and 5 as a separate group.

A comparison, by inspection, of the experimental and control group data for grades K-2, indicates a larger percentage change by the control group from pre-test to post-test. A higher percentage of teachers marked "very much like this student" while a smaller percent marked "somewhat like this student." In grades 3-5, the major change from the pre to the post-test showed a higher percentage of the experimental group in the "very much like this student" category. The control group percentage remained approximately the same from pre to post-test. The trend by section generally resembled the total for the entire group.

An examination of the instrument used in this instance reveals a rating scale of great subjectivity and limited discrimination in the criteria set forth for, or on which judgments are to be made. Approximately 50% of the teachers completing the scale tended to mark only two of the four possible categories, i.e. "very much" or "somewhat like this student." Although there were significant differences between the experimental group and the control group on several of the post-test sections of the scale, the significant Chi Square does not indicate direction either to the experimental or to the control group, i.e. that one was better than, or made greater gains than the other. Inspection of the data indicates that in one instance the experimental group is marked in a certain more positive manner and in another instance, the control group is so marked. Thus, even though Chi Square shows significance in some instances, it is an indeterminate situation since both groups' ratings shift back and forth, from high to low, along the continuum of the scale in each of the five sections. This results in the lack of a consistent pattern of progression in these five sections by either group from the negative, less desirable status, to a positive more desirable status.

Career Education Activities Checklist

During the implementation of the Career Education Project, elementary teachers had been asked to maintain a record of the various career related activities they had used and the number of times such activities were used, either on a daily or weekly basis or several times during the semester. At the end of the school year these were summarized as totals for all elementary teachers responding. A total of 80 elementary teachers responded to the request and completed the checklist in accordance with directions. The data provided indicate that approximately 65% of the elementary teachers responding, involved their students in a wide variety of career related activities and that they did so on a regular and/or consistent basis. However, the summaries also indicate that some activities were not engaged in at all by some teachers.

Findings

1. There were no significant differences between the experimental and control groups as determined by an instrument designed to measure knowledge about careers and the relationships between academics and career development.

2. There were no significant differences which might favor gains by either the experimental group or the control group as determined by an instrument designed to measure development of self-awareness, clarification of personal values, decision-making or knowledge about careers.

3. The instruments were limited in their objectivity and discriminatory powers to measure differences between the two groups.

4. There were no data relative to the measurement of growth in the awareness of the economic aspects of careers.

5. The instruments were not adequate for purposes of testing the objectives set forth for the K-5 level of the project.

6. Teachers, generally, used a variety of career-related activities with their students and used them on a regular or consistent basis.

ACHIEVEMENT IN THE MIDDLE SCHOOLS
Grades 6, 7 and 8

In the Leon District Career Education Program, two of the nine schools in the project were middle schools. Cobb and Raa middle schools participated as experimental entities in the program; however, only Cobb Middle School was involved in the testing program of the project. Belle Vue Middle School served as the control or non-project school for testing purposes in the pre-post design.

Enrollments in these schools were as follows:

School	Enrollment	School	Enrollment
Cobb*	882	Belle Vue*	849
Raa	1,006		

* Schools used in Pre-Post Testing

The purpose of the evaluation was to determine, as based upon the objectives set forth in the project for the middle school level, whether the experimental (project) students, as compared to control (non-project) students, made greater gains toward acquiring competencies identified in the commonly accepted career education elements. Thus, an effort was made to ascertain answers to the following questions:

Did students in the career education programs (experimental group), as compared to students enrolled in traditional education programs (control groups):

1. develop a greater capacity for self-awareness?
2. develop a greater ability in clarifying personal values?
3. demonstrate greater facility at decision making and at career decision making?
4. acquire more knowledge about careers, jobs and job clusters?

5. develop a greater awareness of the relationship between academics and career development?
6. develop a greater awareness of the economic aspects of careers?
7. learn more about skills needed to get and hold a job?

Instrumentation:

Two instruments were administered at the middle school level (Grades 6-8). A pre-test was administered in January, 1975, and a post-test was administered in May, 1975, using both instruments. The "Career Awareness Inventory," was administered at the 6th grade level and at the 7th and 8th grade levels, an instrument entitled, "A Measure of Career Information, Attitudes and Concepts" was employed.

Career Awareness Inventory - Grade 6

This instrument is purported to measure "knowledge, social attitudes, personal experiences and contemplations a student demonstrates about various occupations." The author also indicates that the instrument was originally designed for use in individual interviews, and although useful with groups of students in grades 4-8, scores of older students may be less reliable than those of younger students.

The Career Awareness Inventory consists of seven sub-parts, "useful in identifying specific strengths or weaknesses of individuals or groups." The seven sub-parts are, "identity," "training," "models," "functions," "prestige," "clusters" and "characteristics," and deal with the knowledge, acquaintance or general information which the student may have about an occupation.

A comparison of the experimental and control groups on the seven sub-parts of this inventory, by inspection of the percentages reflecting "correct" answers, indicates no clear trend or basis for distinction between the two groups. The control group gained more than the experimental group on two sections, "models" and "clusters." The experimental group gained more than the control group on the three sections of "training," "functions" and "prestige." There was essentially no difference on the "identity" and "characteristics" subsections.

The only major difference was on the "models" section in which the control group gained 23 percentage points. An example of a question from this section is: "Lawyer/judge - (a) unfamiliar; (b) don't know," (such a person). The section contains 32 questions; each question mentions a different job and asks if the respondent knows a person with that job or does not know a person with that job or in that capacity. The nature of the test and the resultant data do not permit a quantifying analysis of this inventory.

The data from the Career Awareness Inventory were treated by analysis of variance. The analysis indicated that there was a significant difference at the .01 confidence level (F = 7.68) between the total pre-test score and the total post-test score, and that there was a significant difference at the .05 level (F = 6.08), between the total experimental group score and the total control group score. However, the gain from pre-test to post-test made by the experimental group compared to the gain made by the control group was not significantly different. Pertinent data are shown in Table 3.

TABLE 3

GROUP MEANS AND N FOR THE CAREER AWARENESS INVENTORY, EXPERIMENTAL AND CONTROL GROUPS, GRADE 6, PRE-AND POST-TESTS, 1975, LEON DISTRICT

		Pre-Test	Post-Test
Experimental	Means	87	90
	N	53	54
Control	Means	78	88
	N	64	57

A Measure of Career Information, Attitudes and Concepts - Grades 7 and 8

This instrument was designed to measure students' knowledge, attitudes and concepts about the world of work. Part I is a multiple choice section of 27 items which measures job knowledge. Part II is a True-False section of 17 items which measures attitudes and concepts about the world of work and is based on an "agree-disagree," rather than on a "true-false" concept.

The data for grade 7 from this inventory were treated by analysis of covariance. The analysis of covariance on Part I, indicates that the covariate, or pre-test score, was significantly different at the .01 confidence level (F = 97.37). However, after eliminating the pre-test difference, a comparison of gain from pre-test to post-test indicated no significant difference between the two groups. Similar results were obtained on Part II of this inventory by treatment of analysis of covariance (F = 18.40). No significant change between the two groups was found from pre-test to post-test after elimination of the pre-test differences. Pertinent data are shown in Tables 4 and 5.

TABLE 4

GROUP MEANS AND N FOR A MEASURE OF CAREER INFORMATION, ATTITUDES AND CONCEPTS, MULTIPLE CHOICE SECTION (PART 1), EXPERIMENTAL AND CONTROL GROUPS, GRADE 7, PRE-AND POST TEST, 1975, LEON DISTRICT

		Pre-Test	Post-Test
Experimental	Means	16.95	16.71
	N	42	42
Control	Means	17.29	18.11
	N	44	44

TABLE 5

GROUP MEANS AND N FOR A MEASURE OF CAREER INFORMATION, ATTITUDES AND CONCEPTS, TRUE-FALSE SECTION (PART 11), EXPERIMENTAL AND CONTROL GROUPS, GRADE 7, PRE-AND POST TESTS, 1975, LEON DISTRICT

		Pre-Test	Post-Test
Experimental	Means	9.95	10.04
	N	42	42
Control	Means	9.56	8.54
	N	44	44

The data for Grade 8 from this inventory were also treated by analysis of co-variance. The analysis of co-variance on Part 1, indicates that the co-variate, or pre-test score, was significantly different at the .01 confidence level (F = 53.49). However, a comparison of gain from pre-test to post-test was not significantly different for the two groups. On Part 11, the True-False Section, the co-variate, or pre-test score, was significantly different at the .01 confidence level (F = 58.74). Additionally, the gain from the pre-test to the post-test, made by the experimental group was greater than that made by the control group. The difference was significant at the .05 confidence level (F = 4.36). Pertinent data are shown in Table 6 and 7.

TABLE 6

GROUP MEANS AND N FOR A MEASURE OF CAREER INFORMATION, ATTITUDES AND CONCEPTS, MULTIPLE CHOICE SECTION (PART I), EXPERIMENTAL AND CONTROL GROUPS, GRADE 8, PRE-AND POST TEST, 1975, LEON DISTRICT

		Pre-Test	Post-Test
Experimental	Means	18.23	18.73
	N	38	38
Control	Means	16.97	17.52
	N	44	44

TABLE 7

GROUP MEANS AND N FOR A MEASURE OF CAREER INFORMATION, ATTITUDES AND CONCEPTS, TRUE-FALSE SECTION, (PART II), EXPERIMENTAL AND CONTROL GROUPS, GRADE 8, PRE-AND POST TESTS, 1975, LEON DISTRICT

		Pre-Test	Post-Test
Experimental	Means	9.94	10.84
	N	38	38
Control	Means	8.02	8.43
	N	44	44

Career Education Activities/Resource Checklist

During the implementation of the Career Education Project, middle school teachers and counselors/occupational specialists had been asked to maintain a record of the various career related activities and resources they had used and the number of times during the year such activities/resources had been used. These were summarized as totals for all teachers and as totals for the counselors/ occupational specialists. A total of 50 teachers and 4 counselors/occupational specialists completed useable checklists. An examination of the data provided indicates that both teachers and counselors/occupational specialists, in their respective responsibilities, provided a wide variety of career related activities and used varied resources. The data indicate that these activities/resources were used numerous times during the year.

Findings

1. There were no differences in the gains made by the experimental or control groups, grade 6, as determined by an instrument designed to measure knowledge, social attitudes and personal experiences about occupations, except on the "models" section in which the control group gained 23 percentage points.

2. Analysis of variance indicated no significant difference in gains made by the two 6th grade groups on the over-all test scores of an instrument designed to measure knowledge, social attitudes and personal experiences about occupations.

3. There were no differences in the gains made by the experimental or control groups, grades 7 and 8, as determined by an instrument designed to measure knowledge, attitudes and concepts about the world of work, except in Part II, Attitudes and Concepts, Grade 8.

4. By analysis of co-variance it was determined that the difference in gain made by the experimental group, grade 8, compared to the gain made by the control group, grade 8, from pre-test to post-test on the attitudes and concepts section of an instrument designed to measure knowledge, attitudes and concepts about the world of work, was significant at the .05 confidence level. It would therefore appear that the experimental students gained more career information than did the control students.

5. There is no evidence that an effort was made to test for the following objectives stated for the middle schools: grade 6 - self-awareness,

personal values, decision making or skills needed to get and hold a job; grades 7 and 8 - self-awareness, decision making, economic aspects of careers, or skills needed to get and hold a job.

6. Teachers as well as counselors/occupational specialists used a variety of career-related activities/resources with their students, and used them numerous times throughout the year.

ACHIEVEMENT AT THE HIGH SCHOOL AND POST HIGH SCHOOL LEVELS
GRADES 9-14

The early planning of the Leon District Career Education Program included, in addition to the elementary and middle school programs, two high schools, the Area Vocational-Technical School and the Tallahassee Community College. Subsequently, Leon High School (the experimental, project school) and the Area Vocational-Technical School participated, as previously described, in the process and product involvements associated with the career education effort. However, the Tallahassee Community College, insofar as available data indicate, made no efforts at participation or pursuit of activities involved in the career education project. Although the Area Vocational-Technical School participated in the project, it was involved only in a very limited manner in the pre-tests and not at all in the post-tests. Additionally, there was no control group involved in any testing at the post-high school level. Consequently, with extremely limited pre-test data and no post-test data available, no attempt was made to evaluate achievement on the basis of test data at the Area Vocational-Technical School. Godby High School served as the control, or, non-project school, and, along with Leon High School, participated in the pretest activity in January, 1975, and in the post-testing in May, 1975.

Enrollments in the two high schools involved in the testing were as follows:

School	Enrollment
Leon High School	2243
Godby High School	2067

The purpose of the evaluation was to determine, as based upon the objectives set forth in the project for the high school level, whether experimental (project) students, as compared to control (non-project) students, made greater gains toward acquiring competencies identified in the commonly accepted career education elements. Thus, an effort was made to ascertain answers to the following questions:

Did students in the career education programs (experimental group), as compared to students enrolled in traditional education programs (control groups):

1. develop a greater capacity for self-awareness and values clarification?
2. demonstrate greater facility at decision making and at career decision making?
3. develop a greater awareness of the relationships between academics and career development?
4. develop a greater awareness of the economic aspects of careers?
5. learn more about different jobs and job clusters?
6. learn more about skills needed to get and hold a job?
7. develop more occupational skills?

Instrumentation:

Two instruments were administered at the high school level (grades 9-12). Pre-tests were administered in January, 1975, and post-tests were administered in May, 1975. The Assessment of Career Development (ACD) was administered to grades 9 and 11. The Career Maturity Inventory was administered to grades 10 and 12.

Assessment of Career Development

The principal purpose of this instrument is to assist counselors and administrators in obtaining the information needed to develop effective guidance programs designed to meet student needs. It can also be used to assess outcomes of career guidance programs. The Assessment of Career Development (ACD) is composed of three major scales which are structured around the following components of career education: (1) Occupational Awareness, (2) Self Awareness, and (3) Career Planning and Decision Making. Each of these is divided into two or more sub-sections. The instrument also obtains students' reactions to their career guidance experiences and is identified as Section 4 in the instrument.

To the extent that the available data from the administration of this instrument can be reported for comparative purposes of the experimental and control groups, they will be reported by grade levels (grades 9 and 11) and by the components cited above.

Grades 9 and 11 - Section 1, Occupational Awareness

This section consists of two subsections which, in turn, consist of two parts:

1. Occupational Awareness
    - A. Occupational Knowledge
        1. Occupational Characteristics
        2. Occupational Preparation Requirements
    - B. Exploratory Occupational Experiences
        1. Formal Experiences
        2. Informal Experiences

Occupational Characteristics (54 items). This part deals with duties, psychosocial aspects, and worker attributes.

Grade 9 - The computed t-values, comparing the mean scores of the experimental and control groups on the pre and post-tests, indicated no statistically significant differences. Pertinent data are shown in Table 8.

TABLE 8

GROUP MEANS, STANDARD DEVIATIONS, SAMPLE (N) AND t-VALUES
FOR OCCUPATIONAL CHARACTERISTICS OF THE ACD, EXPERIMENTAL AND
CONTROL GROUPS, GRADE 9, PRE AND POST-TESTS,1975
LEON DISTRICT

	Experimental	Control	t-Values
	Pre-Test		
Means	37.35	36.43	0.616
S.D.	7.59	7.48	
N	57	46	
	Post-Test		
Means	36.59	35.75	0.407
S.D.	9.72	9.65	
N	44	44	

Grade 11 - The computed t-value, comparing the mean scores of the experimental and control groups on the pre-test indicated no statistically significant differences. However, on the post-test, the control group mean was significantly higher than that of the experimental group. Pertinent data are shown in Table 9.

TABLE 9

GROUP MEANS, STANDARD DEVIATIONS, SAMPLE (N) AND t-VALUES
FOR OCCUPATIONAL CHARACTERISTICS OF THE ACD, EXPERIMENTAL AND
CONTROL GROUPS, GRADE 11, PRE AND POST-TESTS, 1975
LEON DISTRICT

	Experimental	Control	t-Values
	Pre-Test		
Means	41.31	42.37	-0.768
S.D.	6.70	6.88	
N	54	43	
	Post-Test		
Means	41.19	45.21	-2.806**
S.D.	7.32	3.92	
N	36	33	

** Significant .01 level

Occupational Preparation Requirements (18 items). This part deals with the amount and type of training/education usually associated with various occupations.

Grade 9 - The computed t-values, comparing the mean scores of the experimental and control groups on the pre and post-tests indicated no statistically significant differences. Pertinent data are shown in Table 10.

TABLE 10

GROUP MEANS, STANDARD DEVIATIONS, SAMPLE (N) AND t-VALUES, FOR OCCUPATIONAL PREPARATION REQUIREMENTS OF THE ACD, EXPERIMENTAL AND CONTROL GROUPS, GRADE 9, PRE AND POST-TESTS, 1975, LEON DISTRICT

	Experimental	Control	t-Values
	Pre-Test		
Means	11.12	10.85	0.503
S.D.	2.58	2.86	
N	57	46	
	Post-Test		
Means	11.77	12.07	-0.550
S.D.	2.69	2.38	
N	44	44	

Grade 11 - The computed t-values, comparing the mean scores of the experimental and control groups on the pre and post-tests indicated no statistically significant differences. Pertinent data are shown in Table 11.

TABLE 11

GROUP MEANS, STANDARD DEVIATIONS, SAMPLE (N) AND t-VALUES, FOR OCCUPATIONAL PREPARATION REQUIREMENTS OF THE ACD, EXPERIMENTAL AND CONTROL GROUPS, GRADE 11, PRE AND POST-TESTS, 1975, LEON DISTRICT

	Experimental	Control	t-Values
	Pre-Test		
Means	12.46	12.79	-0.602
S.D.	2.87	2.42	
N	54	43	
	Post-Test		
Means	12.61	13.27	-1.111
S.D.	2.96	1.77	
N	36	33	

Exploratory Occupational Experiences (90 items). This sub-section deals with "formal" and "informal" experiences related to activities typical of occupations in each of six occupational clusters. In this sub-section, a scale ranging from 1.00 to 3.00 was employed to reflect extent of experiences. Thus, a score of 3.00, or approaching 3.00, indicated a large or an extensive number of experiences, and a score of 1.00, indicated few or limited experiences. A score of 2.00 on the scale was considered an average number of experiences.

Grade 9 - Scores ranged from 1.63 to 1.95 (including both groups) and are in the low middle range. Although the experimental group had a slightly higher mean than the control group on both the pre and post-tests, there would appear to be no significant differences between the groups. Pertinent data are shown in Table 12.

TABLE 12

GROUP MEANS, STANDARD DEVIATIONS AND SAMPLE (N) FOR EXPLORATORY OCCUPATIONAL EXPERIENCES OF THE ACD, EXPERIMENTAL AND CONTROL GROUPS, GRADE 9, PRE AND POST-TESTS, 1975
LEON DISTRICT

	Experimental		Control	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Means	1.84	1.91	1.77	1.86
S.D.	.31	.27	.29	.34
N	57	45	46	43

Grade 11 - Scores ranged from 1.59 to 1.99 (including both groups) and are in the low middle range. On the basis of a summary of the exploratory occupational experience scores and the computed data, there would appear to be no differences between the experimental and control groups on either the pre or post-test. Pertinent data are shown in Table 13.

TABLE 13

GROUP MEANS, STANDARD DEVIATIONS AND SAMPLE (N) FOR EXPLORATORY OCCUPATIONAL EXPERIENCES OF THE ACD, EXPERIMENTAL AND CONTROL GROUPS, GRADE 11, PRE AND POST-TESTS, 1975
LEON DISTRICT

	Experimental		Control	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Means	1.84	1.85	1.83	1.85
S.D.	.30	.24	.26	.26
N	53	35	42	33

Grades 9 and 11 - Section 11, Self-Awareness.

This section consists of three sub-sections which, in turn, consist of from one to three parts:

11. Self Awareness
    - A. Preferred Job Characteristics (7 items)
        1. Job Values
        2. Working Condition Preferences

B. Career Plans (4 items)

1. Educational Plans
2. Occupational Preferences
3. Certainty of Occupational Preferences

C. Perceived Needs for Help with Career Planning (9 items).

Data from the entire Self Awareness section are based on questions, choices, and personal perceptions which provide information useful for individual counseling. However, these values, preferences, plans and needs would appear to be meaningless as group measures of comparability. Since the responses in every instance are individual and personal expressions or reflections, they cannot logically be "scored" nor statistically compared. For these reasons no analysis was made of the data in Section II, Self Awareness.

Grades 9 and 11 - Section III, Career Planning and Decision Making.

This section consists of two sub-sections which consist of three and four parts respectively:

III. Career Planning and Decision Making

A. Career Planning Knowledge

1. Knowledge of Basic Career Development Principles
2. Knowledge of Reality Factors
3. Knowledge of the Career Planning Process

B. Career Planning Involvement

1. Seeking Information
2. Doing and Experiencing
3. Focusing Information and Experience Resources
4. Making Career Plans

Career Planning Knowledge (40 items). This part deals with a sampling of facts, concepts and understandings useful in career planning as suggested by career development theory and guidance practice.

Grade 9 - The computed t-values, comparing the mean scores of the experimental and control groups on the pre and post-tests, indicated no statistically significant differences. Pertinent data are shown in Table 14.

TABLE 14

GROUP MEANS, STANDARD DEVIATIONS, SAMPLE (N) AND t-VALUES FOR CAREER PLANNING KNOWLEDGE OF THE ACD, EXPERIMENTAL AND CONTROL GROUPS, GRADE 9, PRE AND POST-TESTS, 1975
LEON DISTRICT

	Experimental	Control	t-Values
	Pre-Test		
Means	24.02	25.72	-1.443
S. D.	6.41	5.31	
N	57	46	
	Post-Test		
Means	23.33	24.00	-0.512
S.D.	6.91	5.19	
N	45	43	

Grade 11 - The computed t-values, comparing the mean scores of the experimental and control groups on the pre-test, indicate no statistically significant differences. However, the mean score of the control group is significantly higher at the .01 confidence level than that of the experimental group on the post-test. Pertinent data are shown in Table 15.

TABLE 15

GROUP MEANS, STANDARD DEVIATIONS, SAMPLE (N) AND t-VALUES FOR CAREER PLANNING KNOWLEDGE OF THE ACD, EXPERIMENTAL AND CONTROL GROUPS, GRADE 11, PRE AND POST-TESTS, 1975 LEON DISTRICT

	Experimental	Control	t-Values
	Pre-Test		
Mean	27.15	28.98	-1.639
S.D.	5.83	4.81	
N	53	42	
	Post-Test		
Mean	26.11	31.24	-4.348**
S.D.	5.91	3.46	
N	36	33	

** Significant .01 level.

Career Planning Involvement (38 items). This is an inventory of student involvement in exploratory and planning experiences available in the school and community both on a formal and informal basis. In this sub-section, a scale ranging from 1.00 to 3.00 was employed to reflect involvement of experiences. Thus, a score of 2.80 to 3.00 indicated extensive involvement, and a score of 1.00 to 1.20 indicated very low or limited involvement. A score of 2.00 on the scale was considered an average level of involvement.

Grade 9 - On the basis of a summary of the career planning involvement experience scores and the computed data, there would appear to be no differences between the experimental and control groups on either the pre or post-test. Pertinent data are shown in Table 16.

TABLE 16

GROUP MEANS, STANDARD DEVIATIONS AND SAMPLE (N) FOR CAREER PLANNING INVOLVEMENT OF THE ACD, EXPERIMENTAL AND CONTROL GROUPS, GRADE 9, PRE AND POST-TESTS, 1975
LEON DISTRICT

	Experimental		Control	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Mean	1.72	1.83	1.73	1.88
S.D.	.35	.33	.32	.36
N	57	45	46	44

Grade 11 - On the basis of a summary of the career planning involvement experience scores and the computed data, there would appear to be no differences between the experimental and control groups on either the pre or post-test. Pertinent data are shown in Table 17.

TABLE 17

GROUP MEANS, STANDARD DEVIATIONS AND SAMPLE (N) FOR CAREER PLANNING INVOLVEMENT OF THE ACD, EXPERIMENTAL AND CONTROL GROUPS, GRADE 11, PRE AND POST-TESTS, 1975
LEON DISTRICT

	Experimental		Control	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Mean	1.86	1.90	1.85	2.00
S.D.	.28	.31	.29	.35
N	54	36	42	33

Grades 9 and 11 - Section IV, Reactions to Career Guidance Experiences. This section deals with the student's perception of help received from various aspects of school career guidance programs.

This is a seven-item, multiple response section concerning information resources, guidance groups and teacher-initiated activities involving subject-related occupations. Students responded to one of four responses in each item.

Summary results, indicating the responses, by percent, are reported here for each item. Responses for the two groups, experimental and control, were highly similar and were combined for this purpose. Total responses (N) all groups and levels = 351.

Responses for items 1-6 were:

A. Help not provided or not used or none

B. This was of little help

C. This was of some help

D. This was a lot of help

Responses for item 7 were:

A. Hardly ever

B. Usually

C. Almost always

D. We don't have a guidance counselor

Item:

1. File of job descriptions, pamphlets, or books on jobs.

Response: A = 36%, B = 23%, C = 30%, D = 9%

2. Films on jobs, talks by workers, "career days," tours.

Response: A = 24%, B = 17%, C = 40%, D = 18%

3. Class discussion by teachers of jobs related to the subject they are teaching.

Response: A = 34%, B = 25%, C = 28%, D = 12%

4. Discussion with a counselor about education and job plans for after high school.

Response: A = 45%, B = 19%, C = 24%, D = 12%

5. Meetings with small groups of students to discuss what we want from a job, educational plans, job plans, etc.

Response: A = 50%, B = 18%, C = 23%, D = 8%

6. Overall, how much help with career planning has your school given you?

Response: A = 14%, B = 37%, C = 36%, D = 11%

7. Do you feel that you can get to see a guidance counselor when you want or need to?

Response: A = 17%, B = 50%, C = 30%, D = 3%

Career Maturity Inventory

The Career Maturity Inventory, consisting of two parts, was developed to survey the attitudes and competencies which are important in making decisions about careers. The Attitude Scale focuses on the student's attitudes and feelings involved in making a career choice and entering the world of work. The Competency Test is concerned with knowledge about occupations and the decisions involved in choosing a career. The inventory consists of a total of six parts.

The Career Maturity Inventory was administered to students in grades 10 and 12 at Leon High School (experimental) and to students in grades 10 and 12 at Godby High School (control). The pre-test was administered in January, 1975, and the post-test in May, 1975.

Grade 10 - The computed t-values, comparing the mean scores of the experimental and control groups on the pre and post-tests of all six parts of the inventory, indicated no statistically significant differences. Pertinent data are shown in Table 18.

TABLE 18

GROUP MEANS, SAMPLE (N) AND t-VALUES, FOR THE CAREER MATURITY INVENTORY, EXPERIMENTAL AND CONTROL GROUPS, GRADE 10, PRE AND POST-TESTS, 1975
LEON DISTRICT

	Pre-Test			Post-Test		
	EXPERIMENTAL Leon	CONTROL Godby	t-Values	EXPERIMENTAL Leon	CONTROL Godby	t-Values
N	53	61		38	40	
Self-Appraisal	14.13	13.64	0.728	13.47	13.18	0.315
Occupational Information	16.49	15.87	0.984	15.32	16.10	-0.826
Goal Selection	14.32	13.36	1.636	12.45	12.62	-0.174
Planning	13.72	14.18	-0.002	12.84	14.15	-1.283
Problem Solving	10.83	11.66	-1.392	10.00	11.65	-1.852
Attitude Scale	34.62	36.21	-1.672	35.76	36.62	-0.699

Grade 12 - The computed t-values, comparing the mean scores of the experimental and control groups on the pre-test, indicated a statistically significant difference between the two groups on two sections of the inventory - "goal selection" and "attitude scale." However, the computed t-values indicated no significant differences between the groups on any section of the post-test data. It should be noted that post-test N is less than half of the pre-test N at this grade level. Pertinent data are shown in Table 19.

TABLE 19

GROUP MEANS, SAMPLE (N) AND t-VALUES, FOR THE CAREER MATURITY INVENTORY, EXPERIMENTAL AND CONTROL GROUPS, GRADE 12, PRE AND POST-TESTS, 1975
LEON DISTRICT

	Pre-Test			Post-Test		
	EXPERIMENTAL Leon	CONTROL Godby	t-Values	EXPERIMENTAL Leon	CONTROL Godby	t-Values
N	53	51		26	21	
Self-Appraisal	14.68	13.71	1.456	15.35	13.90	1.524
Occupational Information	17.21	17.00	0.333	17.88	16.76	1.191
Goal Selection	14.98	13.29	2.119*	15.35	13.38	1.667
Planning	14.26	14.04	0.224	14.50	14.76	-0.195
Problem Solving	11.26	11.18	0.107	11.54	12.14	-0.604
Attitude Scale	37.32	34.92	2.327*	37.54	36.67	0.499

* Significant .05 level.

Career Education Activities/Resources Checklist.

During the implementation of the Career Education Project, Leon High School teachers and counselors/occupational specialists had been asked to maintain a record of the various career related activities and resources they had used and the number of times during the year such activities/resources had been used. These were summarized as totals for all teachers (40) and as totals (6) for the counselors/occupational specialists. Only useable checklists were tabulated. An examination of the data provided indicates that the teachers and counselors/occupational specialists, in their respective responsibilities, provided a wide variety of career related activities and used varied resources. The data further indicate that these activities/resources were used numerous times during the year.

Findings

1. There were no significant differences between the 9th grade experimental and control groups, as determined by an instrument designed to measure occupational knowledge, exploratory occupational experiences or career planning knowledge or involvement.

2. There was a statistically significant difference between the 11th grade experimental and control groups, favoring the control group, as determined by an instrument designed to measure occupational characteristics knowledge and career planning knowledge.

3. There were no significant differences between the 11th grade experimental and control groups, as determined by an instrument designed to measure occupational preparation requirements, exploratory occupational experiences and extent of career planning involvement.

4. Scores for both the experimental and control groups, at both grade levels, (9 and 11), on an instrument designed to measure occupational experiences , indicate students to be in the low-middle range of the scale.

5. Scores for both the experimental and control groups, at both grade levels, (9 and 11), on an instrument designed to measure involvement in exploratory and planning experiences, indicate students to be in the low-middle range of the scale.

6. Students' perceptions of help received were generally favorable with regard to "films on jobs, talks by workers, etc.," the "overall help received from the school" and "availability of guidance counselors."

7. Students' perceptions of help received were not generally favorable with regard to "file of job descriptions, etc.," "class discussions of jobs," "discussion about education and job plans," and "meetings with small groups."

8. There were no significant differences between the 9th grade experimental and control groups, or the 11th grade experimental and control groups, as determined by an instrument designed to measure attitudes, competencies and knowledge about occupations and the decisions involved in choosing a career.

9. Teachers as well as counselors/occupational specialists used a variety of career-related activities/resources with their students, and used them numerous times throughout the year.

10. There is no evidence in the data that an effort was made to test for the following objective stated for the high school level: "develop more occupational skills."

CONCLUSIONS

Achievement of the Product Objectives

Based on the findings for each of the grade level areas tested and analyzed - Grades K-5, 6-8, and 9-12 - it may be concluded that:

Students in the experimental (project) group, as compared with students in the control (non-project) group:

1. Generally, performed equally as well in developing a greater capacity for self-awareness and a greater ability in clarifying personal values, except at grade level 8, where students in the experimental group appear to have developed a greater capacity for self-awareness and a greater ability in clarifying personal values. This difference was significant at the .05 confidence level.

2. Generally, demonstrated equal facility at decision making and at career decision making.

3. Generally, acquired as much knowledge about careers, jobs and job clusters, except at grade level 11, where students in the control group appear to have acquired more knowledge about careers, jobs and job clusters. This difference was significant at the .01 confidence level.

4. Generally, demonstrated an equal awareness of the relationship between academics and career development.

5. Generally, developed an equal awareness of the economic aspects of careers.

6. Generally, learned as much about skills needed to get and hold a job.

7. There is no evidence that an attempt was made to measure the development of occupational skills at any grade level.

The following additional conclusions concerning the achievement of the Product Objectives are drawn:

1. Some of the instruments were not adequate for purposes of testing the objectives set forth in the project.

2. The broad range of objectives developed for the project were not measured or tested for in all instances or at all grade levels as identified in the project for those grade levels.

3. For the most part, teachers and counselors/occupational specialists did use a variety of activities and resources of a career related nature with their students.

4. Students' perceptions of "help received," indicated favorable reaction to the more general aspects of career guidance help, but reflected negatively on several of the more specific, meaningful elements involved in career guidance.

5. The period of time between the pre-test, January, 1975, and the post-test, May, 1975, does not to appear to have been long enough to effect desired changes in students reflected in the several objectives of the project. If this period had been longer, it is possible that more of the objectives would have been met and the desired results of the project would have been attained.

6. It is possible that a more rigid adherence to test administration procedures might have produced more positive results in the overall testing program.

7. It is possible that the application of accepted sampling procedures, both of classes and of students themselves, might have provided more positive results in the overall testing program.

RECOMMENDATIONS

On the basis of the findings and the conclusions drawn from the evaluation, the following recommendations are made:

1. Planning procedures and the processes in the career education program should be evaluated for purposes of program improvement to enable students in the project to fulfill the product objectives.

2. The instructional objectives at the classroom level should be reexamined and refined so that more effective measuring instruments may be developed or identified for future evaluations.

3. A systematic approach, with appropriate organizational structure, should be adopted for purposes of data collection leading to effective, continuing evaluation for program improvement.

4. A formal means of evaluating curriculum materials and developmental procedures should be established.

5. The processes and content of the in-service education program should be closely analyzed to determine the nature of assistance and leadership which classroom teachers need, and to provide a more effective delivery system for such assistance and leadership.

6. Guidance functions and counseling services should be evaluated for the purpose of an improved delivery system of career guidance for all students.

7. Test administration procedures should be examined in an effort to provide improved testing conditions.

8. Limitations should be set to preclude the overburdening of teachers with multiple projects and activities taking place at the same time.

9. A study should be made to determine more effective means of involving parents, business and industry and the community in general in the total program of career development.

10. Total project objectives should be examined, analyzed and refined in an effort to strengthen the basic structure of the career program, its direction and desired outcomes.

APPENDIX A
SELECTED BIBLIOGRAPHY

1. Wasden, Jed W. *An Exemplary Program for Occupational Preparation in Selected Agriculture and Industrial Activities for Small High Schools in Utah.* Salt Lake City: Utah State Board for Vocational Education, 1970.

2. Gibbs, William E. and others. "A Comparative Study of Conventional and Programmed Instruction in Bookkeeping," *The Journal of Educational Research*, Vol. 61, No. 7 (March, 1968).

3. Delon, Floyd G. "A Field Test of Computer Assisted Instruction in First Grade Mathematics," *Educational Leadership*, Vol. 28, No. 2 (November, 1970).

4. Perkins, Lawrence H. *Evaluation of Exemplary Programs in Dade, Duval, Escambia, and Hillsborough Counties*. Pensacola: The University of West Florida, Department of Vocational-Technical Education, 1971.

5. Holstein, Herbert B. *Improving a Rural Area School Program with Expanded Vocational Education Services by Utilizing Comprehensive Career Orientation and Exemplary Activities.* (Interim Report). Hamlin, W. Va.: Lincoln Co. Schools, December, 1971.

6. Kansas State Advisory Council for Vocational Education. *An Exemplary Program in Occupational Education in Typical Kansas Rural, Rural-Urban and Urban School Settings*. (An Evaluation Report). Topeka: Kansas State Board of Education, 1971.

7. Knox County Board of Education. *Contemporary Curriculum for Career Development*. Knoxville, Tenn. : Knox County Board of Education, 1972.

8. Wall, James E. and Shill, James F. *Teacher Inservice Training for Career Education Projects in Mississippi, Final Report*. (June 1, 1971 - June 30, 1972). State College, Miss. : Mississippi Research Coordinating Unit for Vocational Education, 1972.

9. Caldwell County Public Schools. *Guidelines for the Operation, Demonstration, Evaluation and Diffusion of a Model for a Comprehensive Career Education Program in North Carolina, K-14* . Lenoir, N.C.: Caldwell County Public Schools, 1972.

10. Jorgenson, Elaine, and Others. *An Evaluation of Oklahoma's Exemplary Vocational Education and Occupational Orientation Program. Tulsa Public Schools, 1971-72. Interim Evaluation Report*. Stillwater: Division of Research, Planning, and Evaluation, Oklahoma State Department of Vocational and Technical Education, 1972.

11. Deay, Ardeth M. and Others. Infusion Models: Career Education in the Elementary School. Ithaca, New York: State University of New York, Cornell Institute for Research and Development in Occupational Education, February, 1973.

12. Watertown Independent School District 1, South Dakota. Kindergarten Through 12 Project in Career Development and Bridging the Gap Between School and Work. Final Report. Watertown, South Dakota: Watertown Independent School District 1, September 12, 1973.

13. Bonitatebus, Joseph. Career Education. (Second Interim Report of the K-14 Project in Career Education). Bridgeport, Conn.: Bridgeport Public Schools, August, 1973.

14. Carey, E. Niel. Maryland Career Development Project (K-Adult). (Vol. 1. Final Report.) Baltimore: State Department of Education, August, 1973.

15. Ciavarella, Michael A. Career Education in Pennsylvania: The First Year Evaluations of Four Major Projects. Shippensburg, Pa.: Shippensburg State College, July, 1973.

16. Leonard, George E. Developmental Career Guidance Project: 1965-1970. Detroit, Mich. : Wayne State University, 1973.

17. Perkins, Lawrence H. The Evaluation of a Comprehensive Vocational Education Program for Career Development for Grades K-12 in Orange County, Florida. (An Interim Evaluation of Developing Program). Pensacola, Fla.: University of West Florida, 1973.

18. Pinellas County District School Board. A Comprehensive Vocational Education Program for Career Development in Grades K-14. (Final Report) Clearwater, Fla.: Pinellas County School System, June, 1973.

19. Shelver, Janet. Self Awareness Test Instrument. Sioux Falls, S.D.: Sioux Falls Public Schools, July, 1973.

20. Shill, James F., and Others. The Career-Centered Curriculum for the Vocational Complexes in Mississippi. Jackson, Miss.: Mississippi State Board for Vocational Education, June, 1973.

21. Mattei, Otto A., Jr. A Comprehensive Career Education Model, Grades One Through Fourteen. Bowling Green, Ky.: Bowling Independent School District, April, 1974.

22. Smith, Brandon B., and Others. A System for Evaluating Career Education in Minnesota: 1972-1973. Minneapolis: Minnesota Research Coordinating Unit for Vocational Education, 1974.

23. Tuckman, Bruce W., Carducci, Joseph A. Evaluating Career Education: A Review and Model. Princeton, N.J.: Eric Clearing House on Tests, Measurement, and Evaluation, December, 1974.

APPENDIX B

Instruments Used to Collect Data for the Leon District Study 1975

Grade Level	Instrument
1 and 2	*Worker Information Scale* (Modified) Level I. Adapted from a similar instrument reported in Final Report No. VTAD-C4-003, Division of Vocational, Technical and Adult Education, Tallahassee, Florida.
3, 4 and 5	*Worker Information Scale* (Modified) Level II. Adapted from a similar instrument reported in Final Report No. VTAD-C4-003, Division of Vocational, Technical and Adult Education, Tallahassee, Florida.
K-5	*Teacher's Observation Scale of Student Behaviors*. Prepared by Project Staff, Leon District Career Education Program, Tallahassee, Florida, 1975.
6	*Career Awareness Inventory*. Published by Scholastic Testing Service, Bensenville, Illinois. Copyright 1974 by Cornell University, Ithaca, N.Y.
7 and 8	*A Measure of Career Information - Attitudes and Concepts*. Developed by Project No. VTAD-5-4-0032, *The Fusion of FAIS in the Middle Grades*, P. K. Yonge Laboratory School, College of Education, University of Florida, Gainesville.
9 and 11 13 and 14	*Assessment of Career Development*. The American College Testing Program. Houghton Mifflin Company, Boston, Copyright 1974.
10 and 12	*Career Maturity Inventory*. McGraw-Hill, DelMonte Research Park, Monterey, Calif., copyright 1973.
K-12	*Teacher Career Education Activities Checklist*. Prepared by Project Staff, Leon District Career Education Program, Tallahassee, Florida, 1975.